


STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☒

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 1022-2M1CS				
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES				
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES				
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6515				
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL julie.jacobson@anadarko.com				
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ST UT ML 22651			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>				
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')				
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
20. LOCATION OF WELL	FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN			
LOCATION AT SURFACE	1057 FSL 659 FWL		SWSW	2	10.0 S	22.0 E	S			
Top of Uppermost Producing Zone	771 FSL 704 FWL		SWSW	2	10.0 S	22.0 E	S			
At Total Depth	771 FSL 704 FWL		SWSW	2	10.0 S	22.0 E	S			
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 585			23. NUMBER OF ACRES IN DRILLING UNIT 620				
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 1278			26. PROPOSED DEPTH MD: 8600 TVD: 8581				
27. ELEVATION - GROUND LEVEL 5051			28. BOND NUMBER 22013542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496				
Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
SURF	11	8.625	0 - 2150	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
PROD	7.875	4.5	0 - 8600	11.6	I-80 LT&C	12.5	Premium Lite High Strength	270	3.38	11.0
							50/50 Poz	1170	1.31	14.3
ATTACHMENTS										
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
NAME Andy Lytle			TITLE Regulatory Analyst			PHONE 720 929-6100				
SIGNATURE			DATE 08/01/2011			EMAIL andrew.lytle@anadarko.com				
API NUMBER ASSIGNED 43047517810000			APPROVAL  Permit Manager							

RECEIVED: September 27, 2011

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-2M1CS**

Surface: 1057 FSL / 659 FWL SWSW
BHL: 771 FSL / 704 FWL SWSW

Section 2 T10S R22E

Uintah County, Utah
Mineral Lease: ST UT ML 22651

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1052	
Birds Nest	1323	Water
Mahogany	1703	Water
Wasatch	4141	Gas
Mesaverde	6430	Gas
MVU2	7395	Gas
MVL1	7977	Gas
TVD	8581	Gas
TD	8600	Gas

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8581' TVD, approximately equals
5,492 psi 0.64 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,592 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

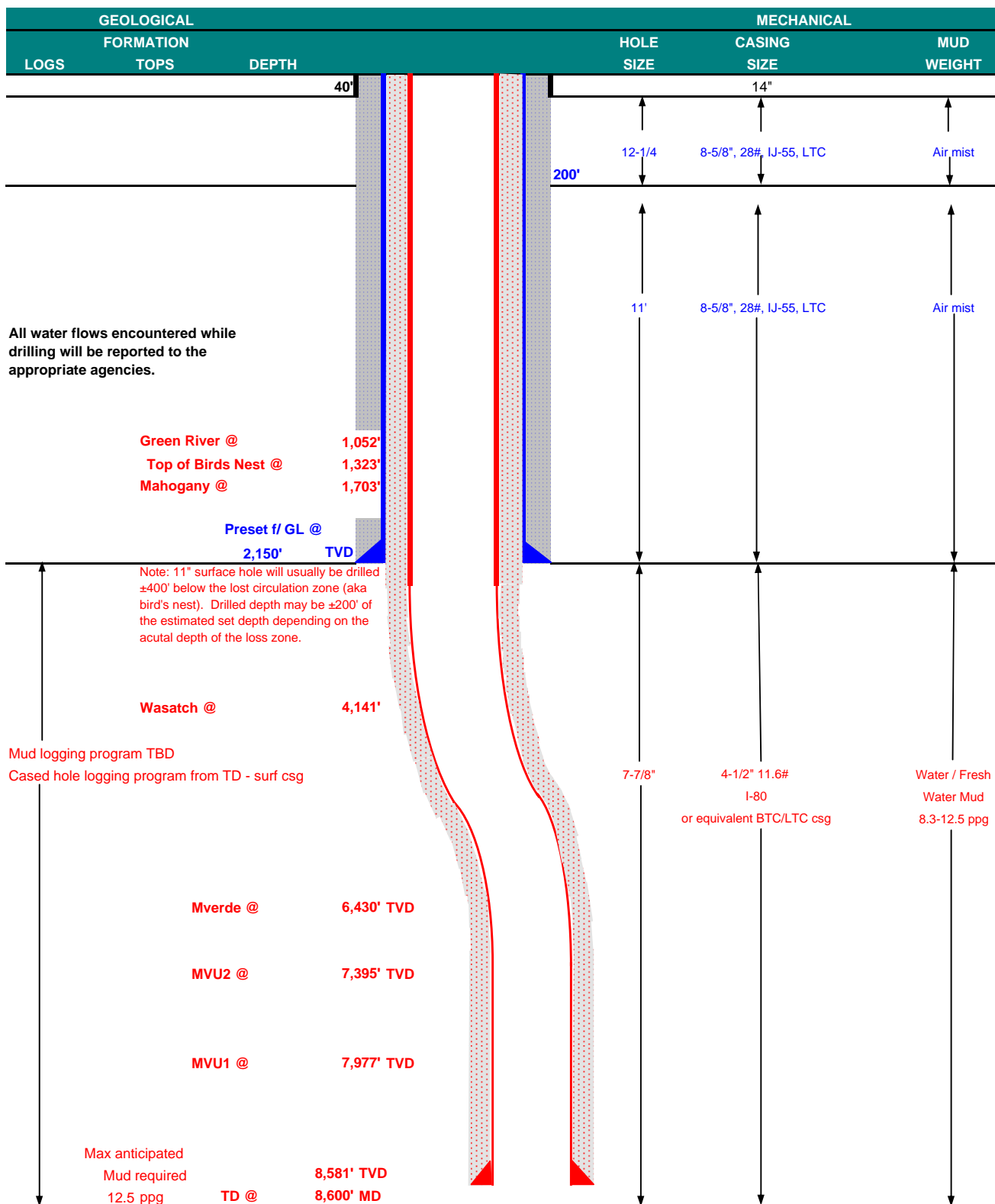
10. **Other Information:**

Please refer to the attached Drilling Program.



KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	July 25, 2011		
WELL NAME	NBU 1022-2M1CS					TD	8,581'	TVD	8,600' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5,046'
SURFACE LOCATION	SWSW	1057 FSL	659 FWL	Sec 2	T 10S	R 22E			
	Latitude: 39.973646		Longitude: -109.413634		NAD 27				
BTM HOLE LOCATION	SWSW	771 FSL	704 FWL	Sec 2	T 10S	R 22E			
	Latitude: 39.97286		Longitude: -109.413472		NAD 27				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								





KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	LTC	BTC
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,150	28.00	IJ-55	LTC	2.52	1.87	6.60
						7,780	6,350	279,000
PRODUCTION	4-1/2"	0 to 8,600	11.60	I-80	LTC/BTC	1.11	1.14	3.46
								4.55

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,650'	65/35 Poz + 6% Gel + 10 pps gilsonite	150	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,640'	Premium Lite II +0.25 pps	270	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	4,960'	50/50 Poz/G + 10% salt + 2% gel	1,170	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

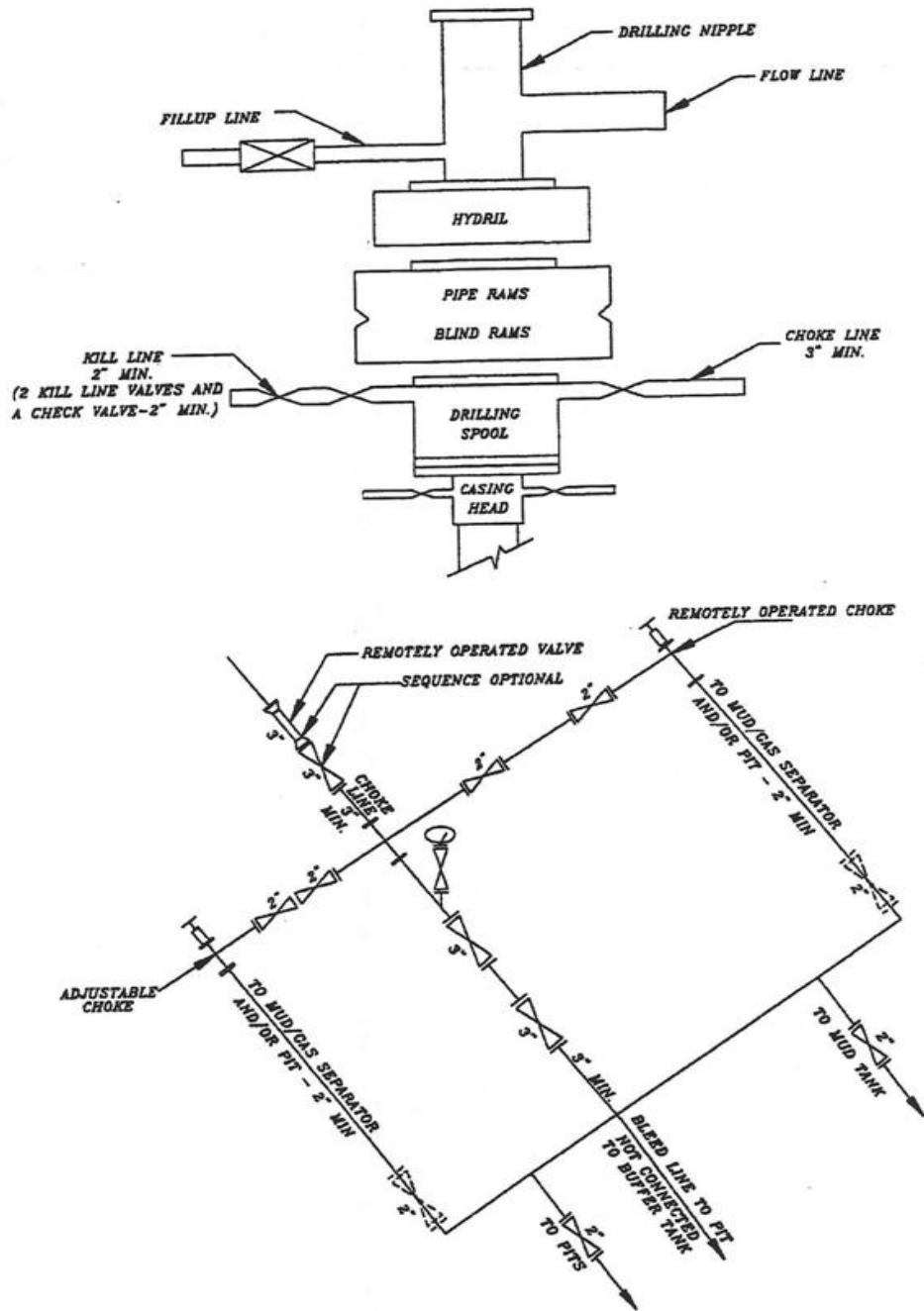
Chad Loesel / Danny Showers

DATE:**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A
NBU 1022-2M1CS



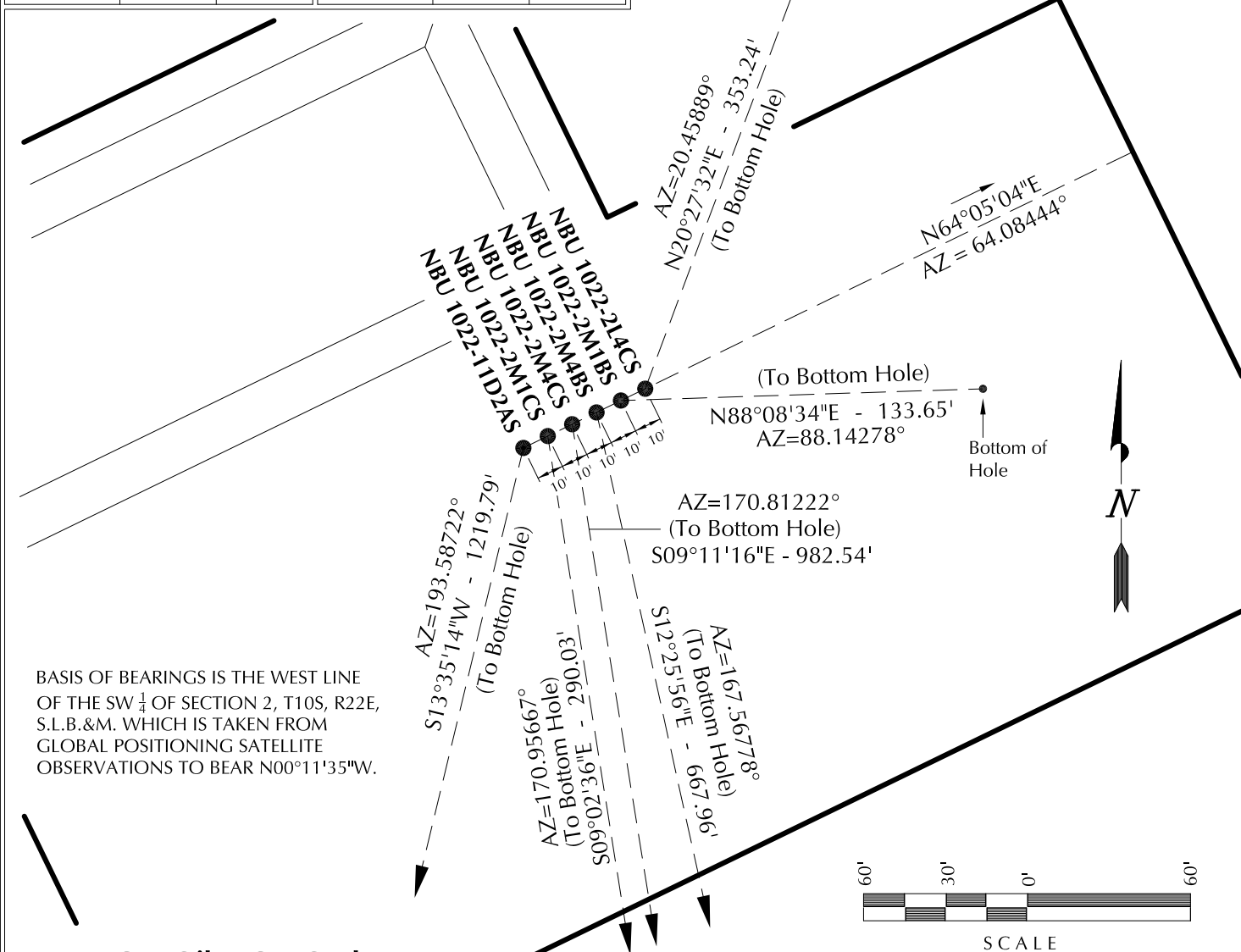
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-11D2AS	39°58'24.958"	109°24'51.654"	39°58'25.082"	109°24'49.199"	1053' FSL 650' FWL	39°58'13.246"	109°24'55.342"	39°58'13.369"	109°24'52.888"	133' FNL 360' FWL
NBU 1022-2M1CS	39°58'25.001"	109°24'51.538"	39°58'25.125"	109°24'49.084"	1057' FSL 659' FWL	39°58'22.171"	109°24'50.955"	39°58'22.295"	109°24'48.501"	771' FSL 704' FWL
NBU 1022-2M4CS	39°58'25.044"	109°24'51.423"	39°58'25.168"	109°24'48.968"	1062' FSL 668' FWL	39°58'15.461"	109°24'49.415"	39°58'15.584"	109°24'46.961"	92' FSL 822' FWL
NBU 1022-2M4BS	39°58'25.087"	109°24'51.307"	39°58'25.211"	109°24'48.853"	1066' FSL 677' FWL	39°58'18.642"	109°24'49.465"	39°58'18.766"	109°24'47.011"	414' FSL 819' FWL
NBU 1022-2M1BS	39°58'25.131"	109°24'51.192"	39°58'25.254"	109°24'48.737"	1071' FSL 686' FWL	39°58'25.173"	109°24'49.476"	39°58'25.297"	109°24'47.022"	1075' FSL 820' FWL
NBU 1022-2L4CS	39°58'25.174"	109°24'51.076"	39°58'25.298"	109°24'48.622"	1075' FSL 695' FWL	39°58'28.443"	109°24'49.488"	39°58'28.567"	109°24'47.034"	1406' FSL 820' FWL

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-11D2AS	-1,185.7'	-286.6'	NBU 1022-2M1CS	-286.4'	45.6'	NBU 1022-2M4CS	-969.9'	156.9'	NBU 1022-2M4BS	-652.3'	143.8'
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST						
NBU 1022-2M1BS	4.3'	133.6'	NBU 1022-2L4CS	331.0'	123.5'						



Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-2M

WELL PAD INTERFERENCE PLAT
WELLS - NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.



CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

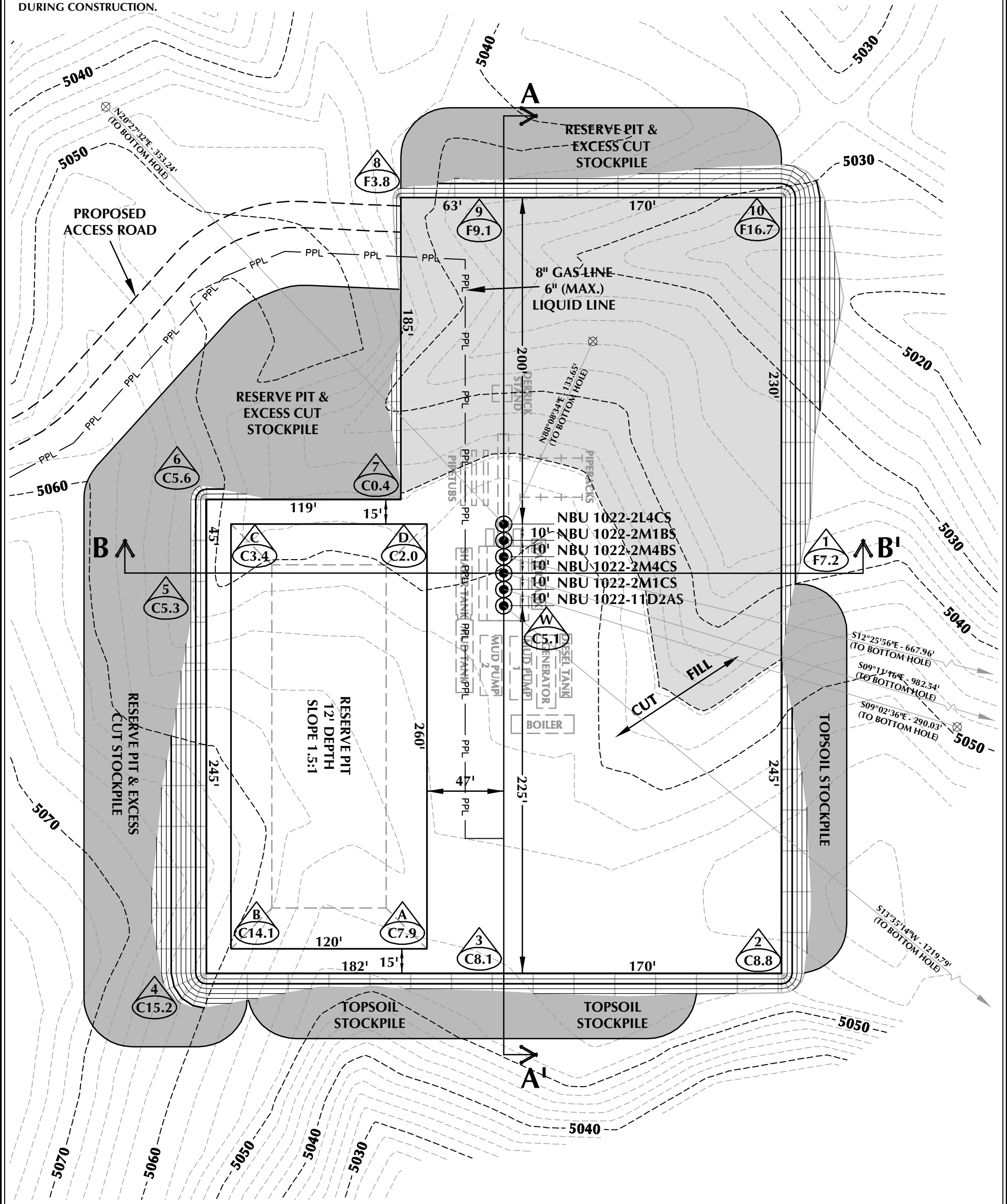
TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 01-12-11	SURVEYED BY: R.Y.	SHEET NO:
DATE DRAWN: 01-31-11	DRAWN BY: E.M.S.	7
SCALE: 1" = 60'	Date Last Revised:	7 OF 18

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.



WELL PAD - NBU 1022-2M DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5050.8'
FINISHED GRADE ELEVATION = 5045.7'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.89 ACRES
TOTAL DISTURBANCE AREA = 6.49 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-2M
WELL PAD - LOCATION LAYOUT
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 26,725 C.Y.
TOTAL FILL FOR WELL PAD = 23,062 C.Y.
TOPSOIL @ 6" DEPTH = 3,138 C.Y.
EXCESS MATERIAL = 3,663 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 11,020 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 42,290 BARRELS



CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

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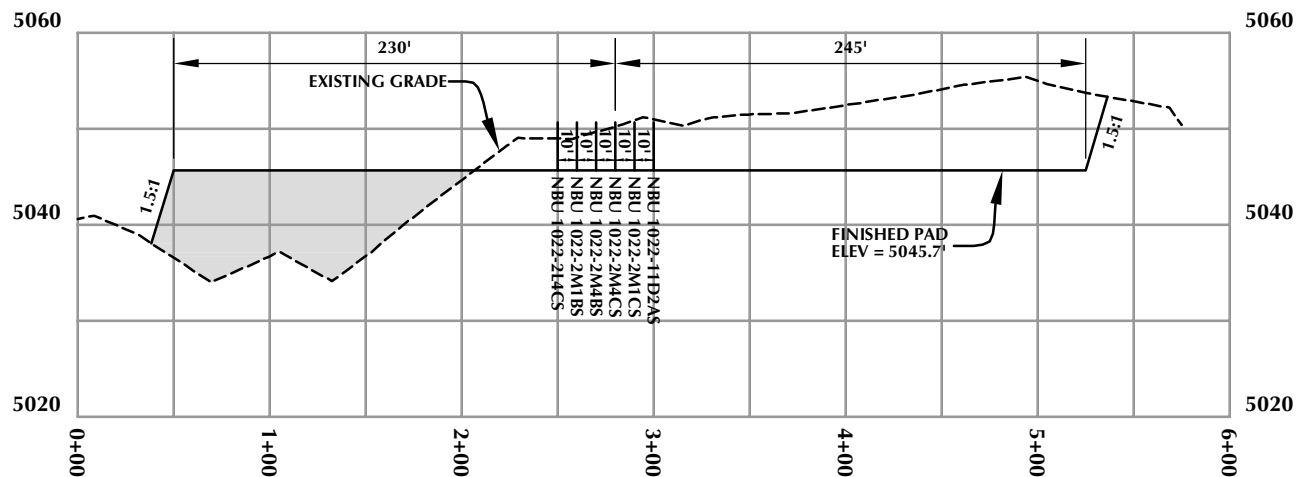
WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE

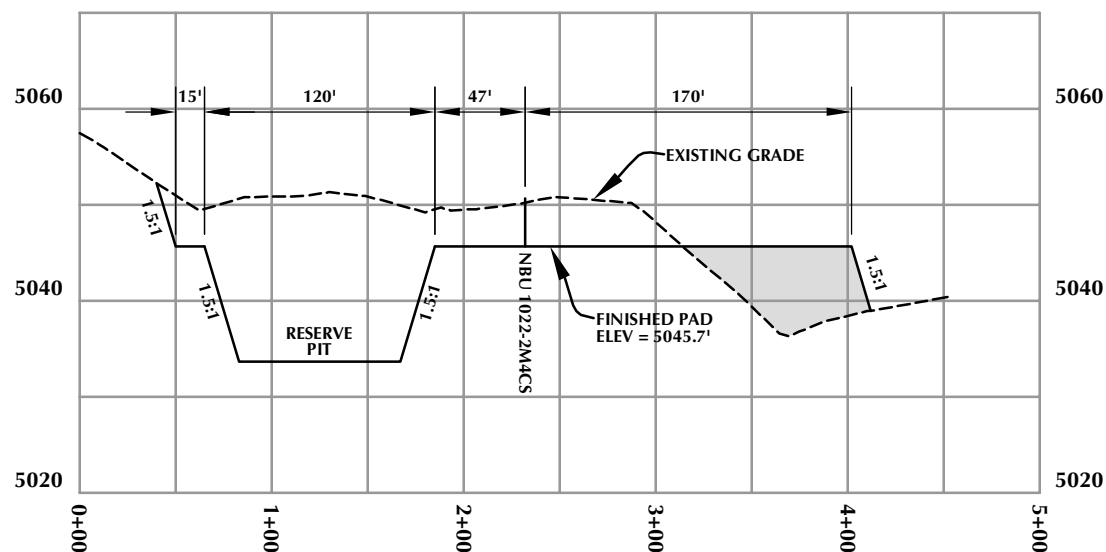


HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

SCALE: 1"=60' DATE: 3/30/11 SHEET NO: 8
REVISED: GRB 4/19/11 8 OF 18



CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-2M

WELL PAD - CROSS SECTIONS
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

Scale: 1"=100'
REVISED:

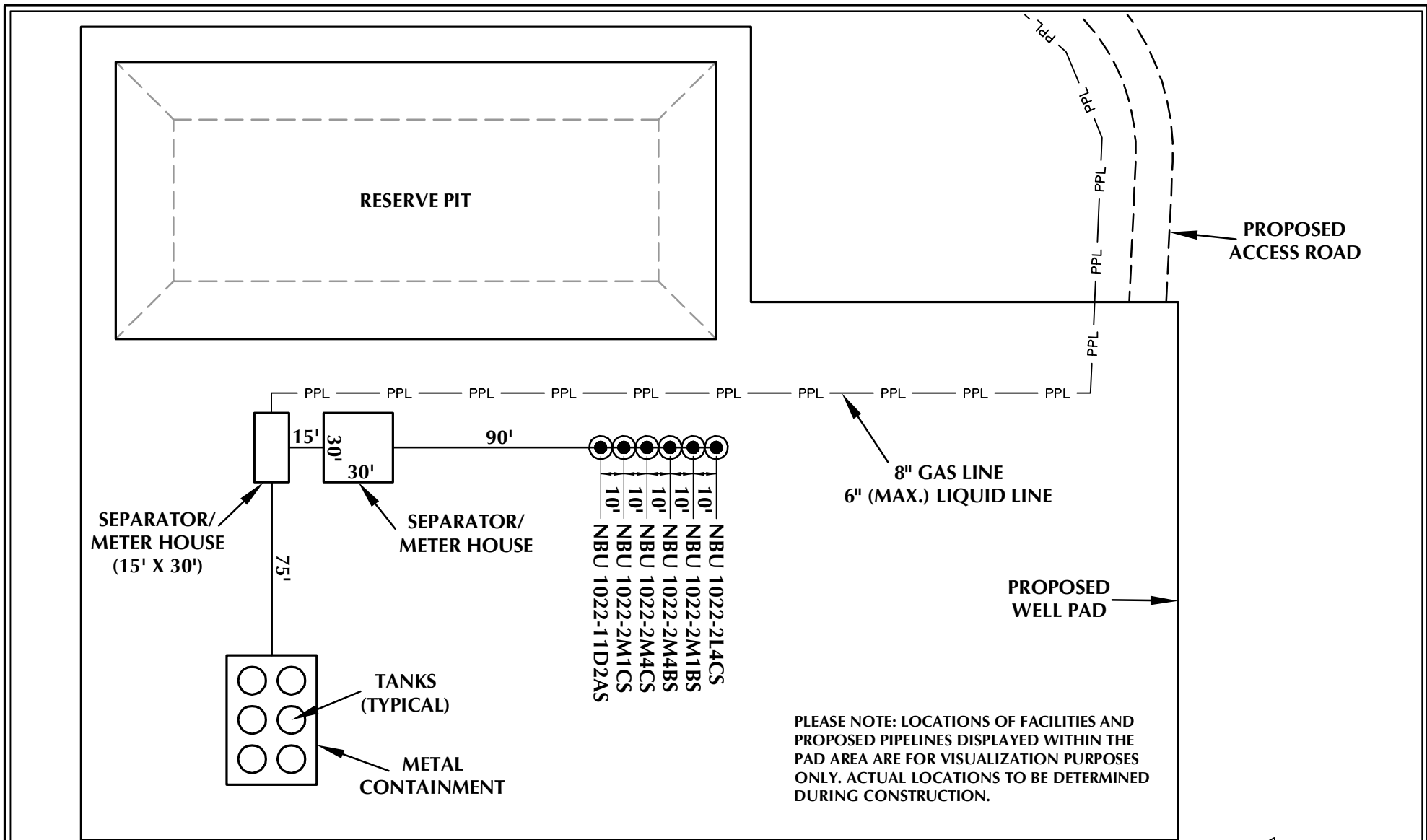
Date: 3/30/11

SHEET NO:

9

9 OF 18

RECEIVED: August 01, 2011



Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-2M

WELL PAD - FACILITIES DIAGRAM
 NBU 1022-11D2AS, NBU 1022-2M1CS,
 NBU 1022-2M4CS, NBU 1022-2M4BS,
 NBU 1022-2M1BS & NBU 1022-2L4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



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 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

TIMBERLINE
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST • VERNAL, UTAH 84078

(435) 789-1365

Scale: 1"=60'

Date: 3/30/11

SHEET NO:

10

10 OF 18

RECEIVED: August 01, 2011

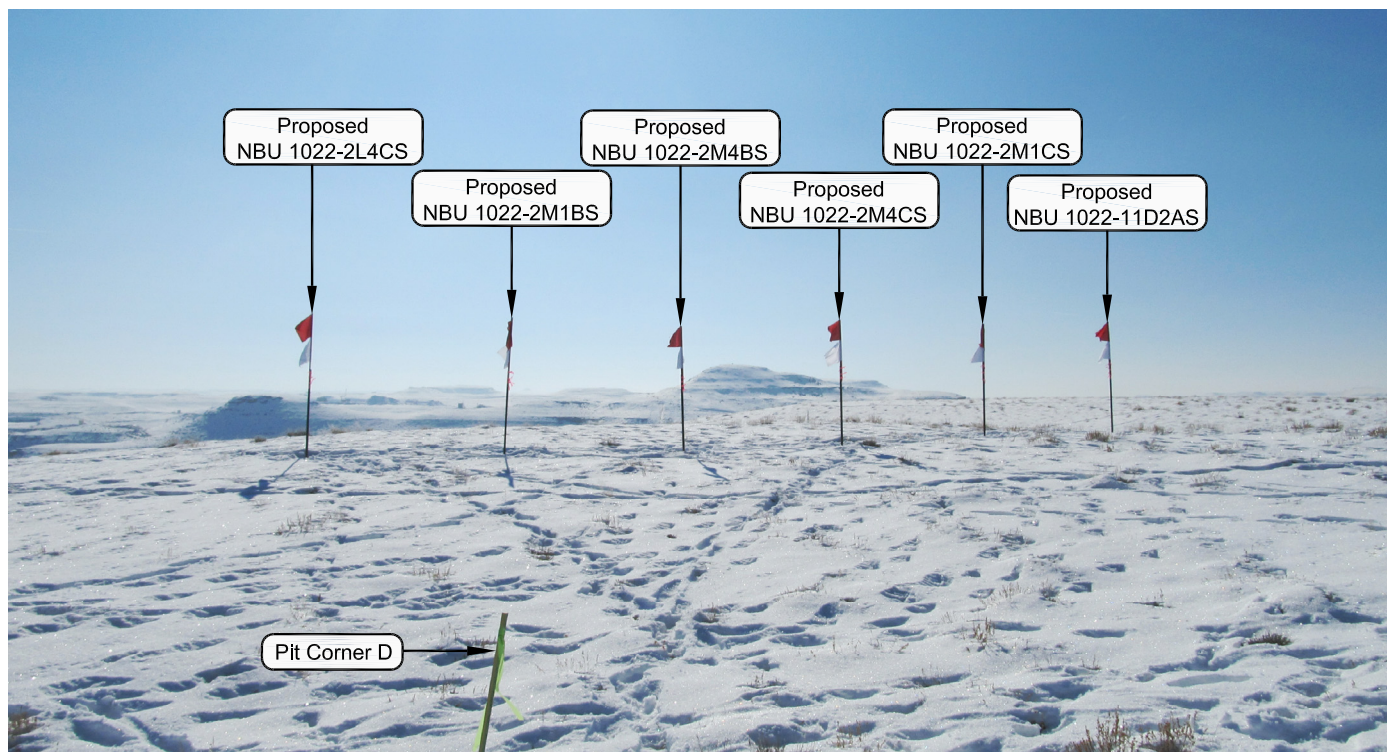


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHEASTERLY

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 1022-2M

LOCATION PHOTOS
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH.



CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

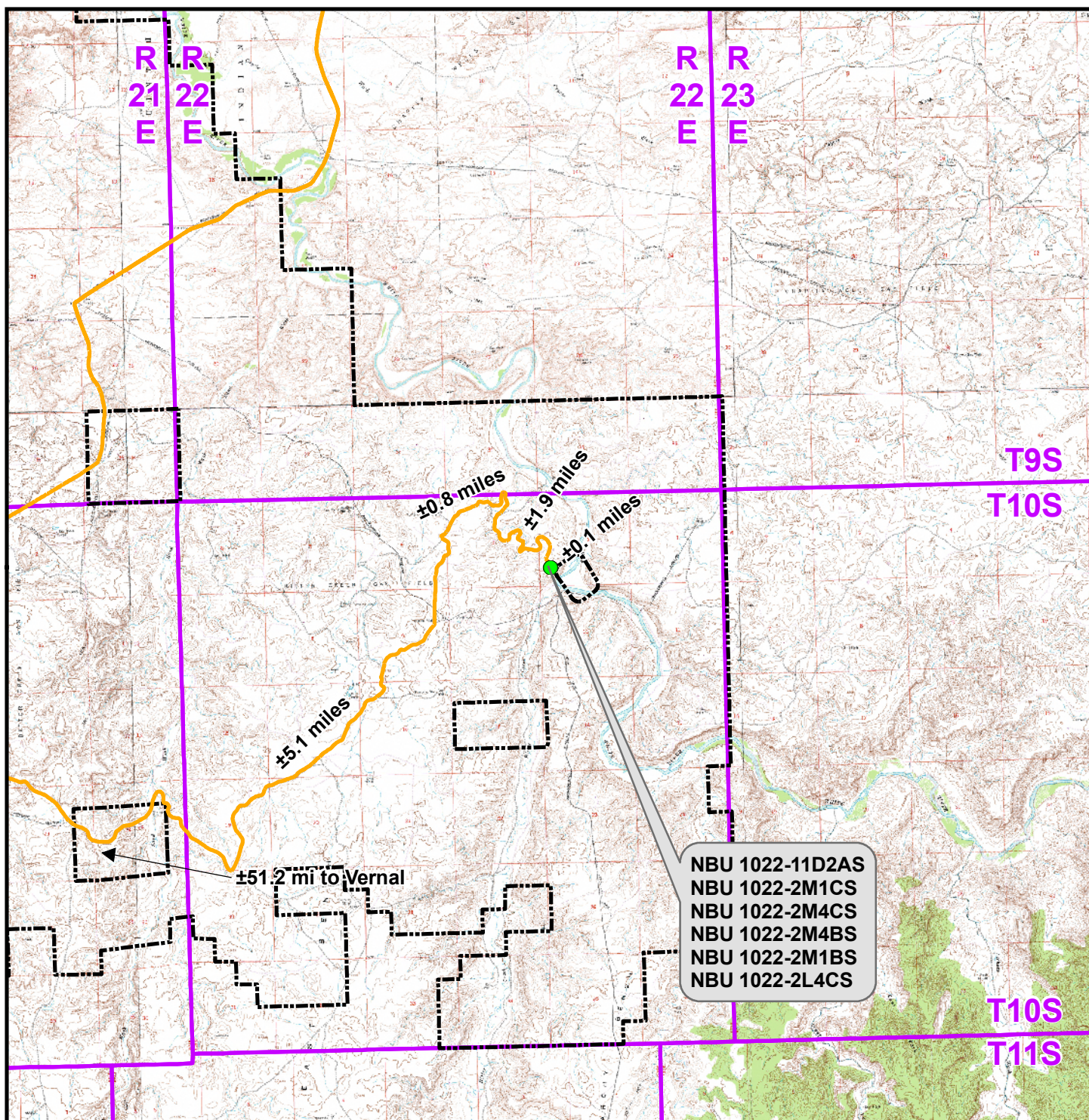
TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 01-12-11	PHOTOS TAKEN BY: R.Y.	SHEET NO: 11 11 OF 18
DATE DRAWN: 01-31-11	DRAWN BY: E.M.S.	
Date Last Revised:		

RECEIVED: August 01, 2011

**Legend**

- Proposed Well Location Natural Buttes Unit Boundary
— Access Route - Proposed

Distance From Well Pad - NBU 1022-2M To Unit Boundary: $\pm 715\text{ft}$

Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2M**TOPO A**

NBU 1022-11D2AS, NBU 1022-2M1CS,
 NBU 1022-2M4CS, NBU 1022-2M4BS,
 NBU 1022-2M1BS & NBU 1022-2L4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC
 2155 North Main Street
 Sheridan, WY 82801
 Phone (307) 674-0609
 Fax (307) 674-0182



Scale: 1:100,000

NAD83 USP Central

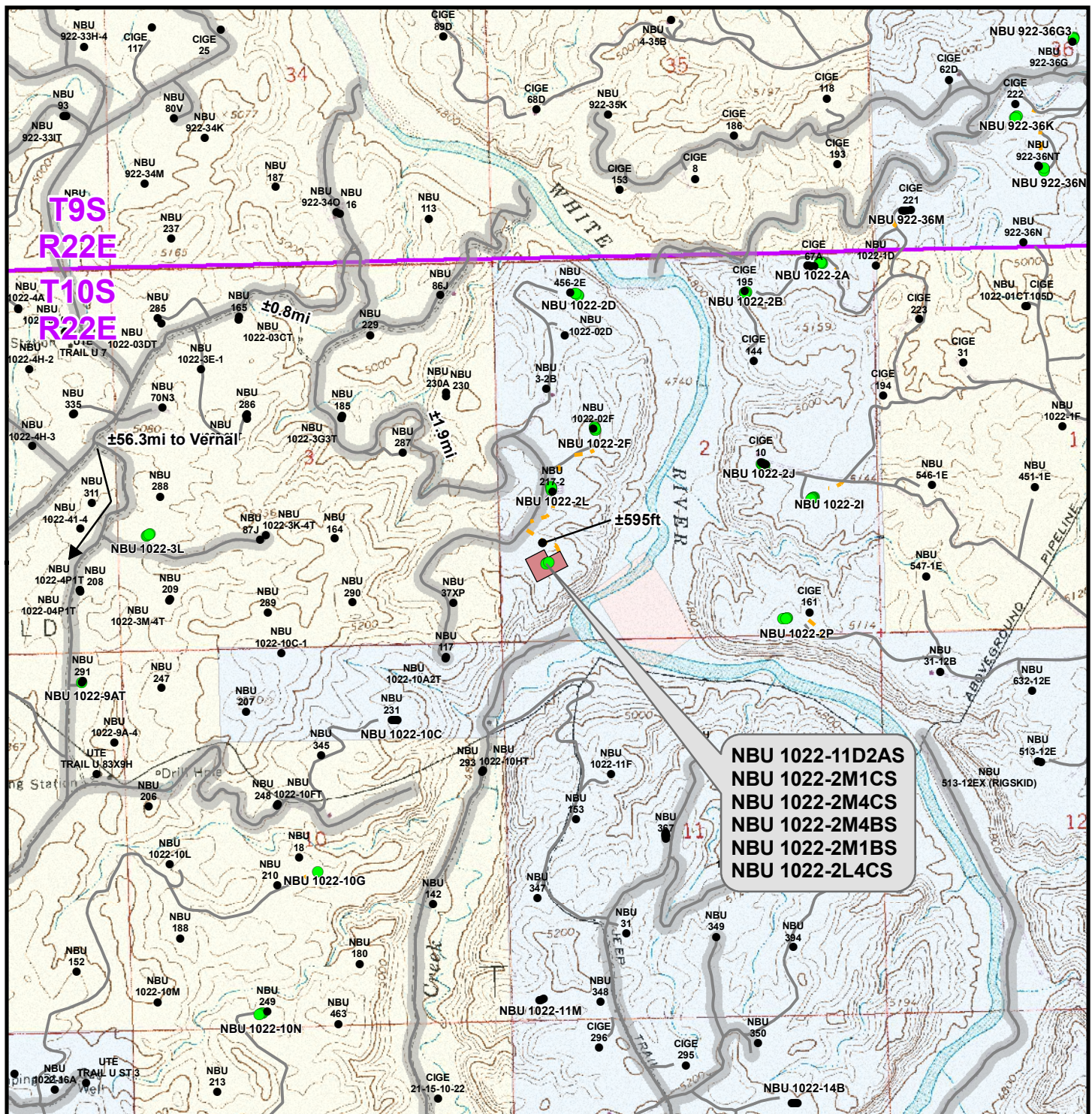
Sheet No:

 Drawn: TL
 Revised:

 Date: 30 Mar 2011
 Date:
12

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Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2M

TOPO B
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

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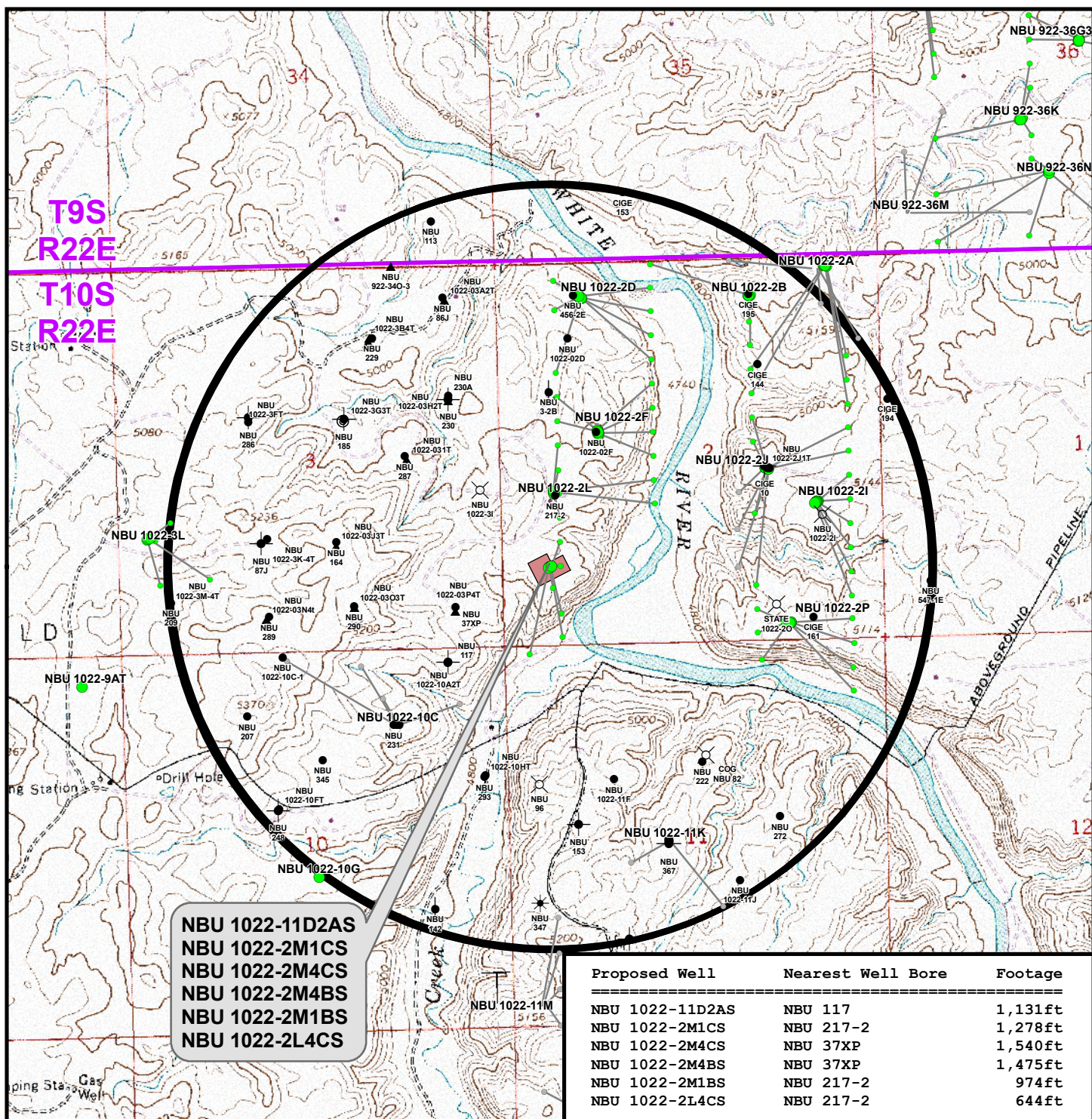
Scale: 1" = 2,000ft
NAD83 USP Central
Drawn: TL
Revised:

Date: 30 Mar 2011
Date:

Sheet No:

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**Legend**

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Bottom Hole - Existing
- Well Pad
- Well - 1 Mile Radius

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2M**TOPO C**

NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH



609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182



- Producing
- ★ Active
- ⊙ Spudded (Drilling commenced; Not yet completed)
- ▲ Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- ⊕ Inactive
- ⊗ Drilling Operations Suspended
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- ⊗ Location Abandoned
- ⊗ Dry hole marker, buried
- ⊗ Returned APD (Unapproved)

Scale: 1" = 2,000ft

NAD83 USP Central

Sheet No:

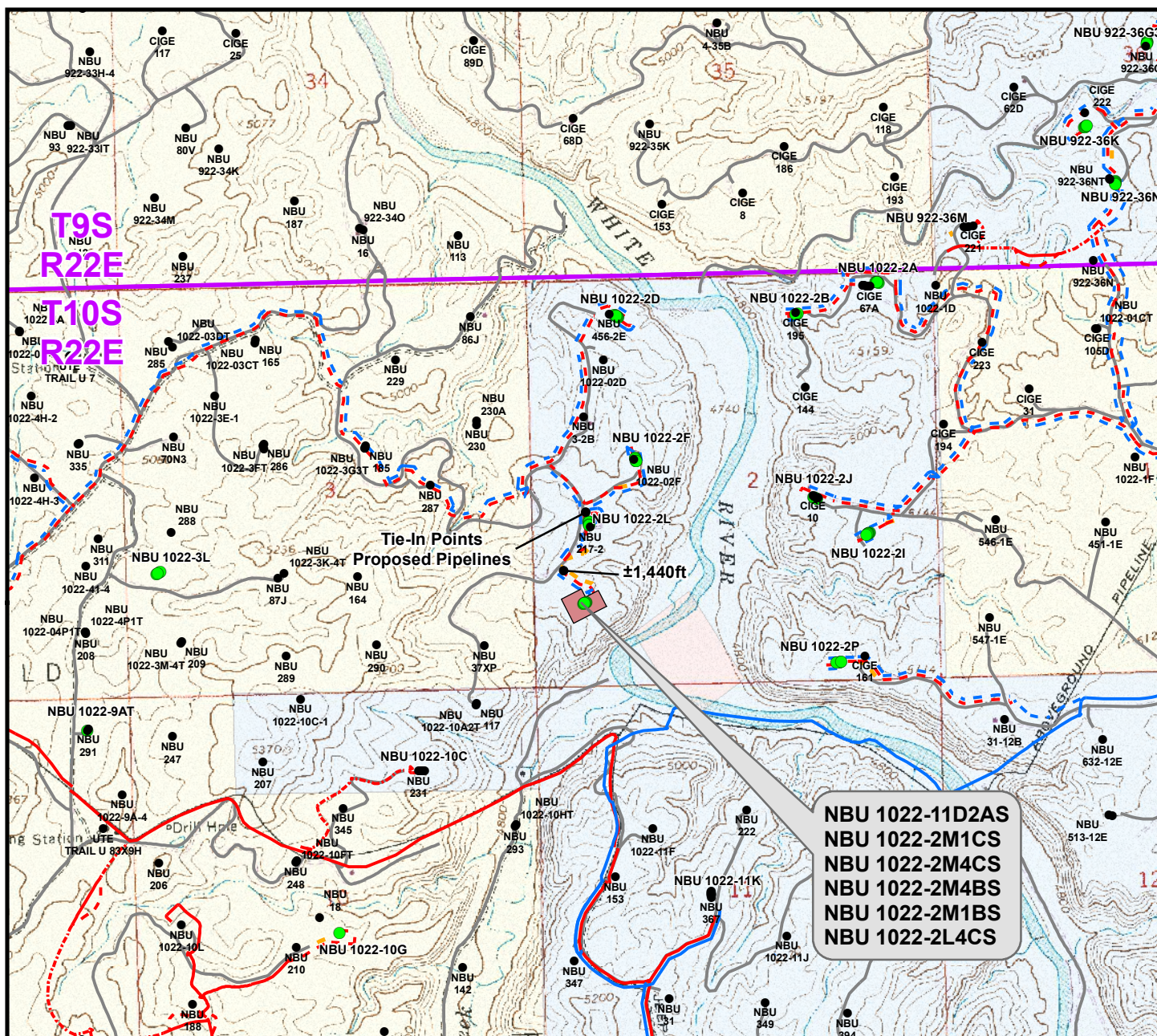
Drawn: TL
Revised:

Date: 30 Mar 2011
Date:

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Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±420ft
Proposed 6" (Max.) (Edge of Pad to 2L Intersection)	±1,440ft
TOTAL PROPOSED LIQUID PIPELINE =	±1,860ft

Proposed Gas Pipeline	Length
Proposed 8" (Meter House to Edge of Pad)	±420ft
Proposed 8" (Edge of Pad to 2L Intersection)	±1,440ft
TOTAL PROPOSED GAS PIPELINE =	±1,860ft

Legend

- Well - Proposed ■ Well Pad - - - Gas Pipeline - Proposed - - - Liquid Pipeline - Proposed - - - Road - Proposed ■ Bureau of Land Management
- Well - Existing - - - Gas Pipeline - To Be Upgraded - - - Liquid Pipeline - Existing - - - Road - Existing ■ Indian Reservation
- - - Gas Pipeline - Existing - - - - - - - - - ■ State
- - - - - - - - - - - - ■ Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2M

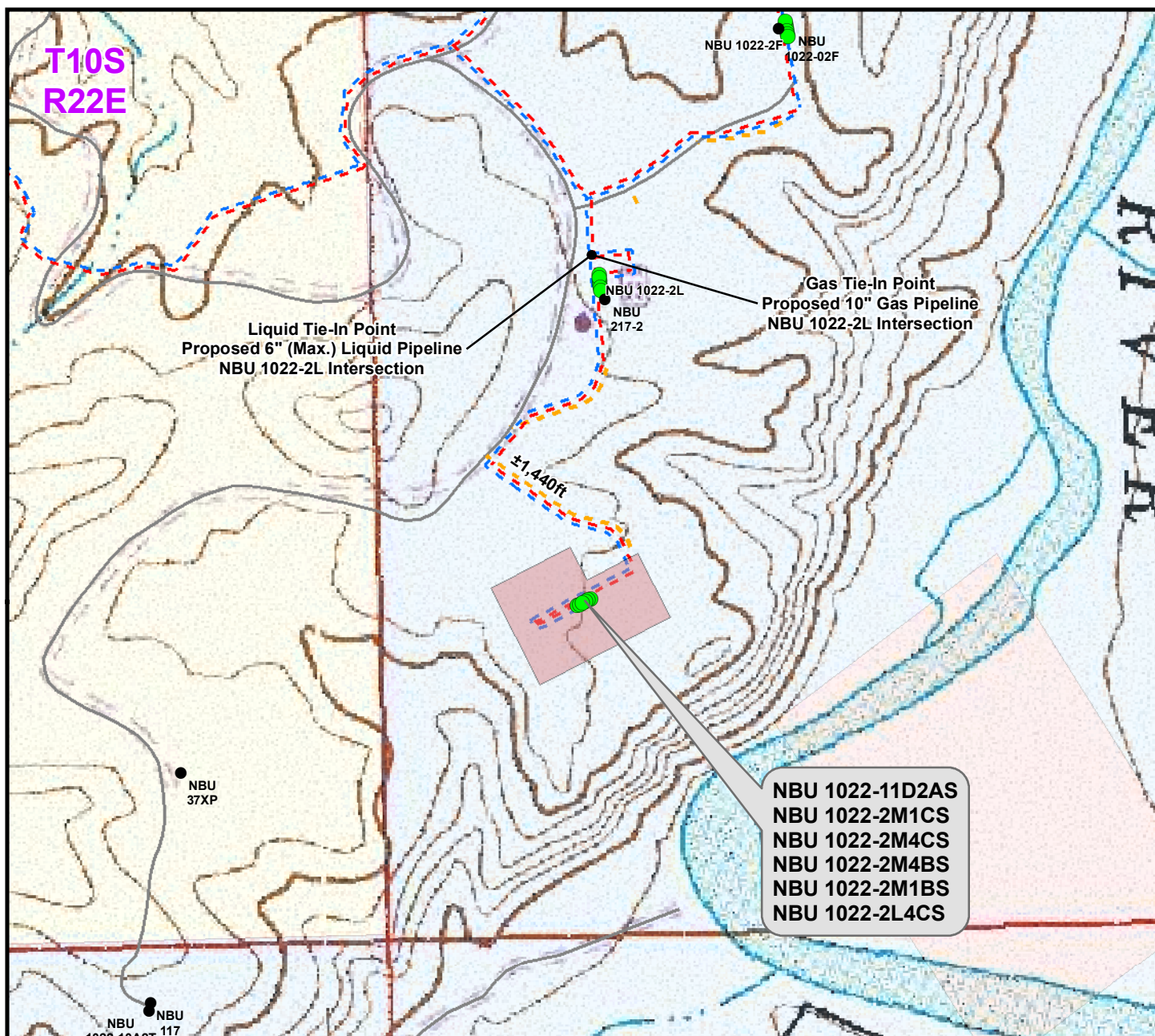
TOPO D
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

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CONSULTING, LLC
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Scale: 1" = 2,000ft NAD83 USP Central Sheet No:
Drawn: KGS Date: 30 Mar 2011
Revised: Date: **15** 15 of 18

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Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±420ft
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TOTAL PROPOSED GAS PIPELINE =	±1,860ft

Legend

- Well - Proposed
 Well Pad
 - - - Gas Pipeline - Proposed
 - - - Liquid Pipeline - Proposed
 - - - Road - Proposed
 Bureau of Land Management
- Well - Existing
 - - - Gas Pipeline - To Be Upgraded
 - - - Liquid Pipeline - Existing
 - - - Road - Existing
 Indian Reservation
- Gas Pipeline - Existing
 State
- Private

Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street, Denver, Colorado 80202

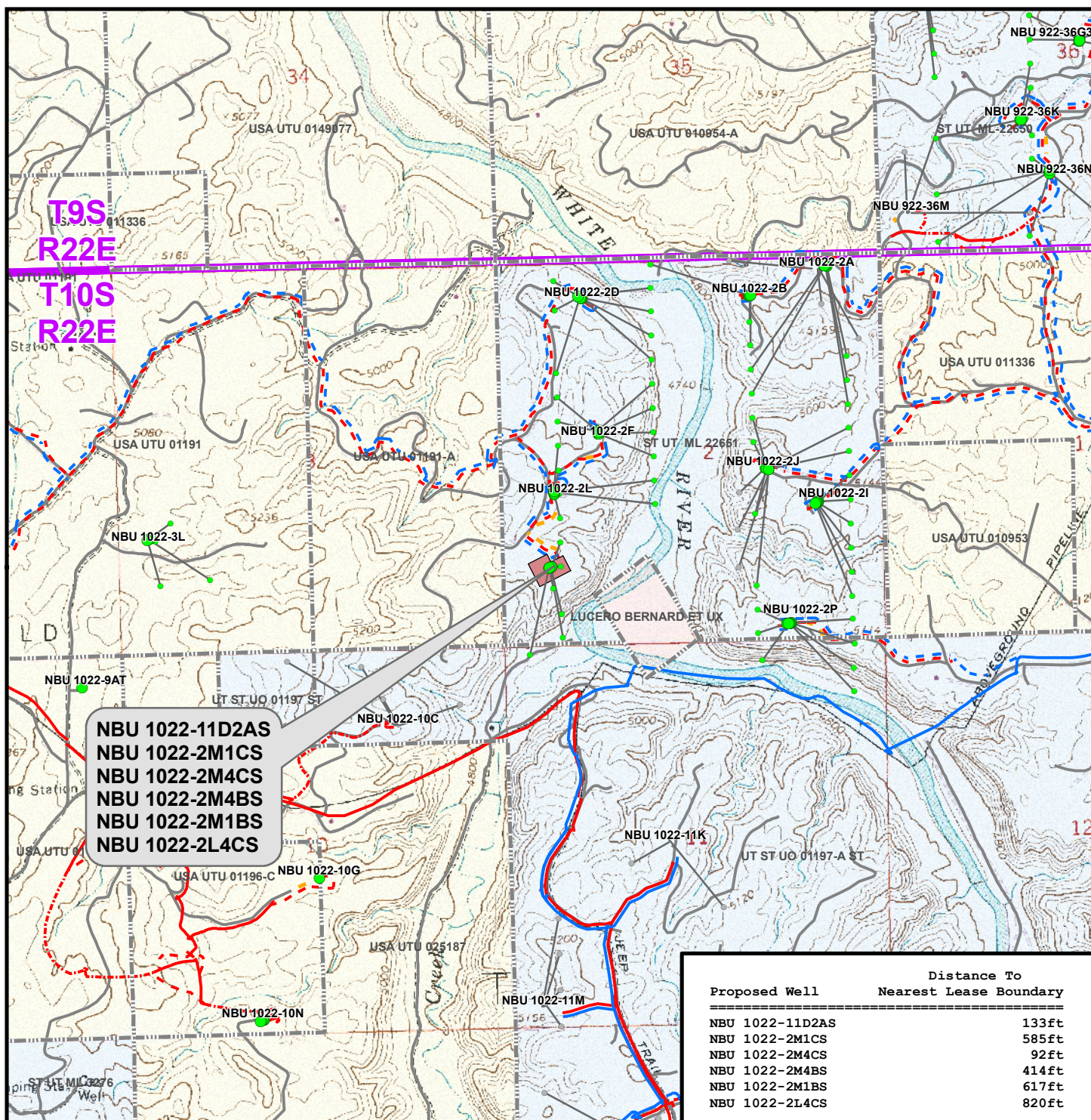
WELL PAD - NBU 1022-2M

TOPO D2 (PAD & PIPELINE DETAIL)
 NBU 1022-11D2AS, NBU 1022-2M1CS,
 NBU 1022-2M4CS, NBU 1022-2M4BS,
 NBU 1022-2M1BS & NBU 1022-2L4CS
 LOCATED IN SECTION 2, T10S, R22E,
 S.L.B.&M., UTAH COUNTY, UTAH



Scale: 1" = 500ft	NAD83 USP Central	Sheet No:
Drawn: KGS	Date: 30 Mar 2011	16
Revised:	Date:	16 of 18

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Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▬ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 1022-2M

TOPO E
NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
LOCATED IN SECTION 2, T10S, R22E,
S.L.B.&M., UTAH COUNTY, UTAH

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CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182



Scale: 1" = 2,000ft

NAD83 USP Central

Sheet No:

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Revised:

Date: 30 Mar 2011
Date:

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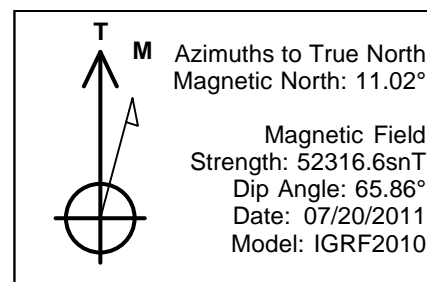
17 of 18

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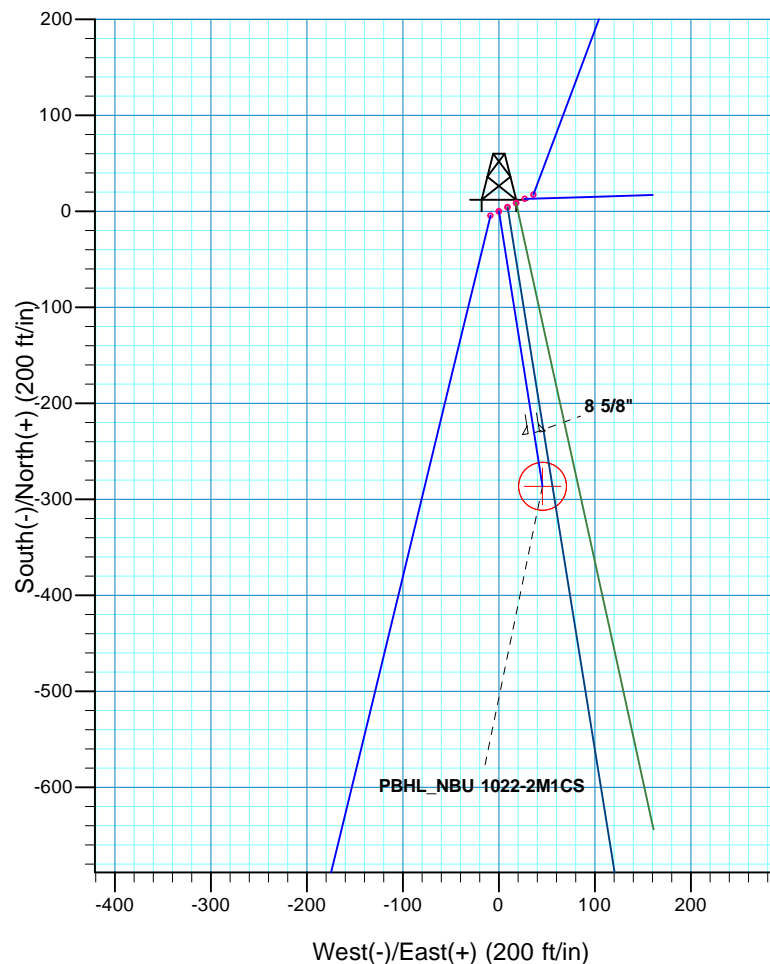
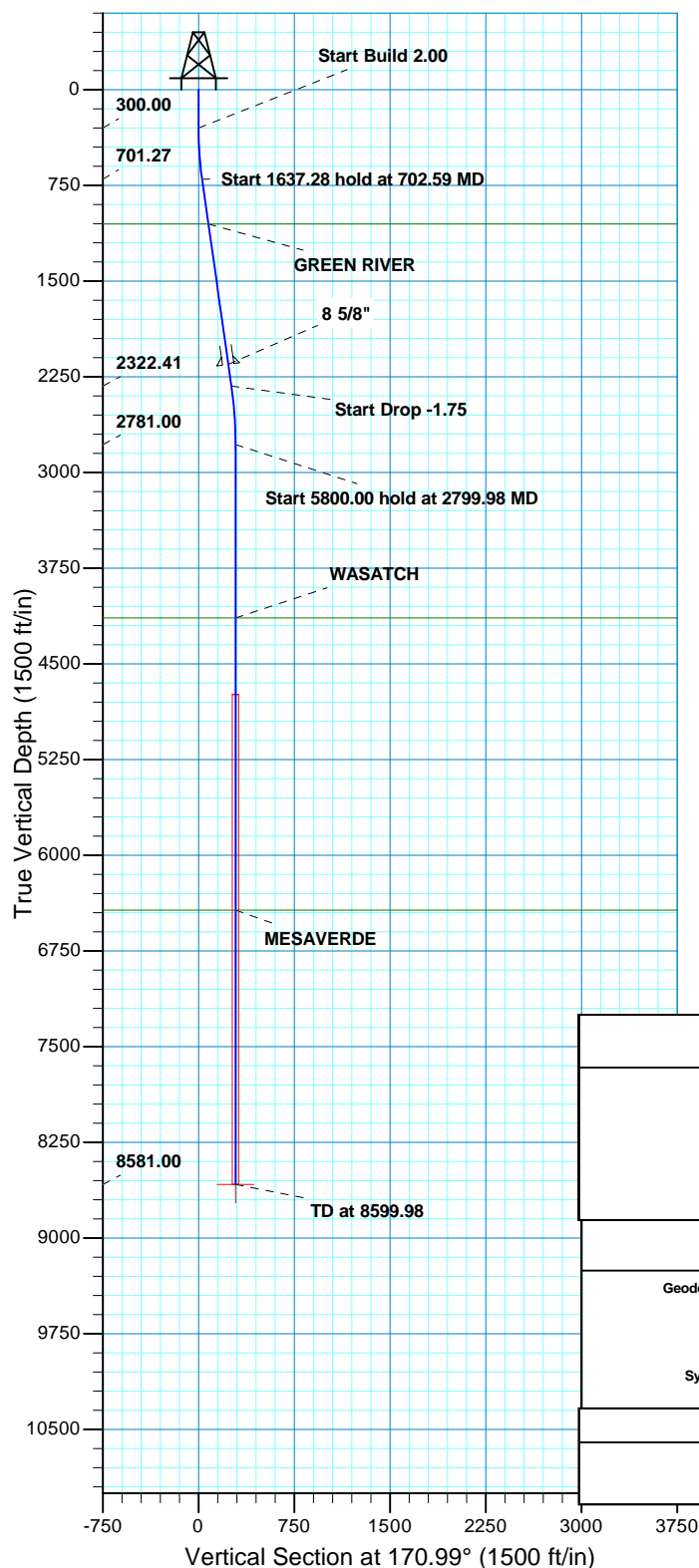
**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD - NBU 1022-2M
WELLS – NBU 1022-11D2AS, NBU 1022-2M1CS,
NBU 1022-2M4CS, NBU 1022-2M4BS,
NBU 1022-2M1BS & NBU 1022-2L4CS
Section 2, T10S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 23.8 miles to the intersection of the Bitter Creek Road (County B Road 4120). Exit left and proceed in a southeasterly direction along the Bitter Creek Road approximately 3.9 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 5.1 miles to a second Class D County Road to the northeast. Exit right and proceed in a northeasterly direction along the second Class D County Road approximately 0.8 miles to a third Class D County Road to the south. Exit right and proceed in a southerly, then easterly, then south westerly direction along the third Class D County Road approximately 1.9 miles to the proposed access road. Follow road flags in a southeasterly direction approximately 595 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 59.1 miles in a southerly direction.



WELL DETAILS: NBU 1022-2M1CS						
GL 5046' & KB 4' @ 5050.00ft (ASSUMED)						
+N/-S 0.00	+E/-W 0.00	Northing 14520401.40	Easting 2084872.42	Latitude 39° 58' 25.126 N	Longitude 109° 24' 49.082 W	
DESIGN TARGET DETAILS						
Name PBHL	TVD 8581.00	+N/-S -286.27	+E/-W 45.40	Northing 14520115.98	Easting 2084922.90	Latitude 39° 58' 22.296 N
- plan hits target center						
				Longitude 109° 24' 48.499 W	Shape Circle (Radius: 25.00)	



SECTION DETAILS									
	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
	702.59	8.05	170.99	701.27	-27.89	4.42	2.00	170.99	28.24
	2339.87	8.05	170.99	2322.41	-254.40	40.34	0.00	0.00	257.57
	2799.98	0.00	0.00	2781.00	-286.27	45.40	1.75	180.00	289.85
	8599.98	0.00	0.00	8581.00	-286.27	45.40	0.00	0.00	289.85
PBHL_NBU 1022-2M1CS									
PROJECT DETAILS: Uintah County, UT UTM12							FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 - Western US Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 2 T10S R22E System Datum:Mean Sea Level							TVDPath	MDPath	Formation
							1052.00	1056.82	GREEN RIVER
							4141.00	4159.98	WASATCH
							6430.00	6448.98	MESAVERDE
CASING DETAILS									
				TVD	MD	Name	Size		
				2153.00	2168.78	8 5/8"	8.625		
Plan: PLAN #1 PRELIMINARY (NBU 1022-2M1CS/OH)									
Created By: RobertScott							Date: 13:24, July 20 2011		

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Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 1022-2M PAD

NBU 1022-2M1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

20 July, 2011



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SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Site:	NBU 1022-2M PAD	North Reference:	True
Well:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project	Uintah County, UT UTM12		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	NBU 1022-2M PAD, SECTION 2 T10S R22E		
Site Position:		Northing:	14,520,419.52 usft
From:	Lat/Long	Easting:	2,084,907.97 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	39° 58' 25.298 N
		Longitude:	109° 24' 48.622 W
		Grid Convergence:	1.02 °

Well	NBU 1022-2M1CS, 1057 FSL 659 FWL		
Well Position	+N/-S	-17.48 ft	Northing:
	+E/-W	-35.87 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39° 58' 25.126 N
		Longitude:	109° 24' 49.082 W
		Ground Level:	5,046.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/20/11	11.02	65.86	52,317

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	170.99

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
702.59	8.05	170.99	701.27	-27.89	4.42	2.00	2.00	0.00	170.99	
2,339.87	8.05	170.99	2,322.41	-254.40	40.34	0.00	0.00	0.00	0.00	
2,799.98	0.00	0.00	2,781.00	-286.27	45.40	1.75	-1.75	0.00	180.00	
8,599.98	0.00	0.00	8,581.00	-286.27	45.40	0.00	0.00	0.00	0.00	PBHL_NBU 1022-2M



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Site:	NBU 1022-2M PAD	North Reference:	True
Well:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	170.99	399.98	-1.72	0.27	1.75	2.00	2.00	0.00
500.00	4.00	170.99	499.84	-6.89	1.09	6.98	2.00	2.00	0.00
600.00	6.00	170.99	599.45	-15.50	2.46	15.69	2.00	2.00	0.00
700.00	8.00	170.99	698.70	-27.54	4.37	27.88	2.00	2.00	0.00
702.59	8.05	170.99	701.27	-27.89	4.42	28.24	2.00	2.00	0.00
Start 1637.28 hold at 702.59 MD									
800.00	8.05	170.99	797.72	-41.37	6.56	41.89	0.00	0.00	0.00
900.00	8.05	170.99	896.73	-55.20	8.75	55.89	0.00	0.00	0.00
1,000.00	8.05	170.99	995.74	-69.04	10.95	69.90	0.00	0.00	0.00
1,056.82	8.05	170.99	1,052.00	-76.90	12.19	77.86	0.00	0.00	0.00
GREEN RIVER									
1,100.00	8.05	170.99	1,094.76	-82.87	13.14	83.91	0.00	0.00	0.00
1,200.00	8.05	170.99	1,193.77	-96.70	15.34	97.91	0.00	0.00	0.00
1,300.00	8.05	170.99	1,292.79	-110.54	17.53	111.92	0.00	0.00	0.00
1,400.00	8.05	170.99	1,391.80	-124.37	19.72	125.93	0.00	0.00	0.00
1,500.00	8.05	170.99	1,490.82	-138.21	21.92	139.93	0.00	0.00	0.00
1,600.00	8.05	170.99	1,589.83	-152.04	24.11	153.94	0.00	0.00	0.00
1,700.00	8.05	170.99	1,688.84	-165.88	26.30	167.95	0.00	0.00	0.00
1,800.00	8.05	170.99	1,787.86	-179.71	28.50	181.95	0.00	0.00	0.00
1,900.00	8.05	170.99	1,886.87	-193.54	30.69	195.96	0.00	0.00	0.00
2,000.00	8.05	170.99	1,985.89	-207.38	32.89	209.97	0.00	0.00	0.00
2,100.00	8.05	170.99	2,084.90	-221.21	35.08	223.98	0.00	0.00	0.00
2,168.78	8.05	170.99	2,153.00	-230.73	36.59	233.61	0.00	0.00	0.00
8 5/8"									
2,200.00	8.05	170.99	2,183.91	-235.05	37.27	237.98	0.00	0.00	0.00
2,300.00	8.05	170.99	2,282.93	-248.88	39.47	251.99	0.00	0.00	0.00
2,339.87	8.05	170.99	2,322.41	-254.40	40.34	257.57	0.00	0.00	0.00
Start Drop -1.75									
2,400.00	7.00	170.99	2,382.02	-262.17	41.58	265.45	1.75	-1.75	0.00
2,500.00	5.25	170.99	2,481.44	-272.71	43.25	276.12	1.75	-1.75	0.00
2,600.00	3.50	170.99	2,581.15	-280.24	44.44	283.75	1.75	-1.75	0.00
2,700.00	1.75	170.99	2,681.04	-284.77	45.16	288.32	1.75	-1.75	0.00
2,799.98	0.00	0.00	2,781.00	-286.27	45.40	289.85	1.75	-1.75	0.00
Start 5800.00 hold at 2799.98 MD									
2,800.00	0.00	0.00	2,781.02	-286.27	45.40	289.85	0.00	0.00	0.00
2,900.00	0.00	0.00	2,881.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,000.00	0.00	0.00	2,981.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,100.00	0.00	0.00	3,081.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,200.00	0.00	0.00	3,181.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,300.00	0.00	0.00	3,281.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,400.00	0.00	0.00	3,381.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,500.00	0.00	0.00	3,481.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,600.00	0.00	0.00	3,581.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,700.00	0.00	0.00	3,681.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,800.00	0.00	0.00	3,781.02	-286.27	45.40	289.85	0.00	0.00	0.00
3,900.00	0.00	0.00	3,881.02	-286.27	45.40	289.85	0.00	0.00	0.00



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Site:	NBU 1022-2M PAD	North Reference:	True
Well:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,000.00	0.00	0.00	3,981.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,081.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,159.98	0.00	0.00	4,141.00	-286.27	45.40	289.85	0.00	0.00	0.00	
WASATCH										
4,200.00	0.00	0.00	4,181.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,281.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,381.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,481.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,581.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,681.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,781.02	-286.27	45.40	289.85	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,881.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,981.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,081.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,181.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,281.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,381.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,481.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,581.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,681.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,781.02	-286.27	45.40	289.85	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,881.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,981.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,081.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,181.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,281.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,381.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,448.98	0.00	0.00	6,430.00	-286.27	45.40	289.85	0.00	0.00	0.00	
MESAVERDE										
6,500.00	0.00	0.00	6,481.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,581.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,681.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,781.02	-286.27	45.40	289.85	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,881.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,981.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,081.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,181.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,281.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,381.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,481.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,581.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,681.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,781.02	-286.27	45.40	289.85	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,881.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,981.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,081.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,181.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,281.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,381.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,481.02	-286.27	45.40	289.85	0.00	0.00	0.00	
8,599.98	0.00	0.00	8,581.00	-286.27	45.40	289.85	0.00	0.00	0.00	
PBHL_NBU 1022-2M1CS										



SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Company:	Kerr McGee Oil and Gas Onshore LP	TVD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	MD Reference:	GL 5046' & KB 4' @ 5050.00ft (ASSUMED)
Site:	NBU 1022-2M PAD	North Reference:	True
Well:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NBU 1022-2M1C	0.00	0.00	8,581.00	-286.27	45.40	14,520,115.98	2,084,922.90	39° 58' 22.296 N	109° 24' 48.499 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,168.78	2,153.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,056.82	1,052.00	GREEN RIVER			
4,159.98	4,141.00	WASATCH			
6,448.98	6,430.00	MESAVERDE			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
702.59	701.27	-27.89	4.42	Start 1637.28 hold at 702.59 MD	
2,339.87	2,322.41	-254.40	40.34	Start Drop -1.75	
2,799.98	2,781.00	-286.27	45.40	Start 5800.00 hold at 2799.98 MD	
8,599.98	8,581.00	-286.27	45.40	TD at 8599.98	

NBU 1022-11D2AS/ 1022-2L4CS/ 1022-2M1BS/ 1022-2M1CS
1022-2M4BS/ 1022-2M4CS

Surface Use Plan of Operations
1 of 7

NBU 1022-11D2AS			
Surface:	1053 FSL / 650 FWL	SWSW	Lot 5
BHL:	133 FNL / 360 FWL	NWNW	Lot
NBU 1022-2L4CS			
Surface:	1075 FSL / 695 FWL	SWSW	Lot 5
BHL:	1406 FSL / 820 FWL	NWSW	Lot
NBU 1022-2M1BS			
Surface:	1071 FSL / 686 FWL	SWSW	Lot 5
BHL:	1075 FSL / 820 FWL	SWSW	Lot 5
NBU 1022-2M1CS			
Surface:	1057 FSL / 659 FWL	SWSW	Lot 5
BHL:	771 FSL / 704 FWL	SWSW	Lot 5
NBU 1022-2M4BS			
Surface:	1066 FSL / 677 FWL	SWSW	Lot 5
BHL:	414 FSL / 819 FWL	SWSW	Lot 5
NBU 1022-2M4CS			
Surface:	1062 FSL / 668 FWL	SWSW	Lot 5
BHL:	92 FSL / 822 FWL	SWSW	Lot 5

Pad: NBU 1022-2M PAD
Section 2 T10S R22E
Mineral Lease: ST UT ML 22651

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

One new access road is proposed (see Topo Map B). The $\pm 595'$ proposed road will follow the proposed gas and liquid pipelines from the NE edge of the pad to the existing county road. Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

The NBU 1022-2M pad is a newly proposed well pad with no existing wells.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,860'$ and the individual segments are broken up as follows:

- $\pm 420'$ (0.08 miles) – New 8" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 1,440'$ (0.27 miles) – New 8" buried gas pipeline from edge of the pad to the proposed 1022-2L Intersection 10" gas pipeline. Please Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is $\pm 1,860'$ and the individual segments are broken up as follows:

- $\pm 420'$ (0.08 miles) – Up to 6" new buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- $\pm 1,440'$ (0.27 miles) – Up to 6" new buried liquid pipeline from the edge of the pad to the proposed 1022-2L Intersection 6" (max) liquid pipeline. Please Topo D2 - Pad and Pipeline Detail.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification.)

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

L. Other Information:

None

NBU 1022-11D2AS/ 1022-2L4CS/ 1022-2M1BS/ 1022-2M1CS
1022-2M4BS/ 1022-2M4CS

Surface Use Plan of Operations
7 of 7

M. Lessee's or Operators' Representative & Certification:

Andy Lytle
Regulatory Analyst I
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6100

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Andy Lytle

July 21, 2011

Date



Joseph D. Johnson
1099 18TH STREET STE. 1800 • DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

July 21, 2011

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
NBU 1022-2M1CS
T10S-R22E
Section 2: SWSW
Surface: 1057' FSL, 659' FWL
T10S-R22E
Section 2: SWSW
Bottom Hole: 771' FSL, 704' FWL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-2M1CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

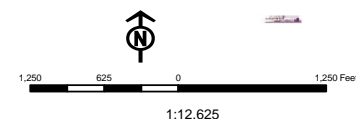
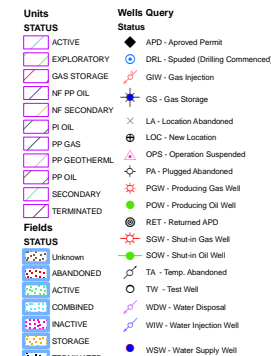
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe D. Johnson', with a horizontal line underneath.

Joseph D. Johnson
Landman

RECEIVED: August 01, 2011

Map Prepared:
Map Produced by Diana Mason



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

August 5, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ WASATCH-MESA VERDE)

NBU 1022-2F PAD

43-047-51760	NBU 1022-E4BS	Sec 02 T10S R22E 2386 FNL 1379 FWL
	BHL	Sec 02 T10S R22E 2231 FNL 0822 FWL

43-047-51761	NBU 1022-2F1CS	Sec 02 T10S R22E 2366 FNL 1376 FWL
	BHL	Sec 02 T10S R22E 1738 FNL 2145 FWL

43-047-51764	NBU 1022-2F4BS	Sec 02 T10S R22E 2395 FNL 1381 FWL
	BHL	Sec 02 T10S R22E 2069 FNL 2144 FWL

43-047-51765	NBU 1022-2F4CS	Sec 02 T10S R22E 2405 FNL 1382 FWL
	BHL	Sec 02 T10S R22E 2412 FNL 2141 FWL

43-047-51766	NBU 1022-2K1BS	Sec 02 T10S R22E 2415 FNL 1384 FWL
	BHL	Sec 02 T10S R22E 2566 FSL 2142 FWL

43-047-51785	NBU 1022-2E1CS	Sec 02 T10S R22E 2376 FNL 1377 FWL
	BHL	Sec 02 T10S R22E 1900 FNL 0823 FWL

NBU 1022-2D PAD

43-047-51767	NBU 1022-2C4BS	Sec 02 T10S R22E 0526 FNL 1185 FWL
	BHL	Sec 02 T10S R22E 0745 FNL 2148 FWL

43-047-51768	NBU 1022-2C4CS	Sec 02 T10S R22E 0537 FNL 1202 FWL
	BHL	Sec 02 T10S R22E 1076 FNL 2147 FWL

43-047-51779	NBU 1022-2D1BS	Sec 02 T10S R22E 0503 FNL 1152 FWL
	BHL	Sec 02 T10S R22E 0291 FNL 0807 FWL

RECEIVED: August 08, 2011

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51780	NBU 1022-2D4BS	Sec 02 T10S R22E 0514 FNL 1168 FWL
	BHL	Sec 02 T10S R22E 0692 FNL 0820 FWL
43-047-51782	NBU 1022-2E1BS	Sec 02 T10S R22E 0520 FNL 1177 FWL
	BHL	Sec 02 T10S R22E 1569 FNL 0823 FWL
43-047-51783	NBU 1022-2F1BS	Sec 02 T10S R22E 0531 FNL 1193 FWL
	BHL	Sec 02 T10S R22E 1407 FNL 2146 FWL
NBU 1022-2L PAD		
43-047-51771	NBU 1022-2E4CS	Sec 02 T10S R22E 2127 FSL 0750 FWL
	BHL	Sec 02 T10S R22E 2561 FNL 0822 FWL
43-047-51772	NBU 1022-2L1CS	Sec 02 T10S R22E 2087 FSL 0753 FWL
	BHL	Sec 02 T10S R22E 2067 FSL 0821 FWL
43-047-51773	NBU 1022-2L1BS	Sec 02 T10S R22E 2117 FSL 0751 FWL
	BHL	Sec 02 T10S R22E 2398 FSL 0822 FWL
43-047-51774	NBU 1022-2L4BS	Sec 02 T10S R22E 2077 FSL 0754 FWL
	BHL	Sec 02 T10S R22E 1736 FSL 0821 FWL
43-047-51776	NBU 1022-2K1CS	Sec 02 T10S R22E 2107 FSL 0752 FWL
	BHL	Sec 02 T10S R22E 2235 FSL 2141 FWL
43-047-51777	NBU 1022-2K4BS	Sec 02 T10S R22E 2097 FSL 0752 FWL
	BHL	Sec 02 T10S R22E 1904 FSL 2140 FWL
NBU 1022-2M PAD		
43-047-51775	NBU 1022-2L4CS	Sec 02 T10S R22E 1075 FSL 0695 FWL
	BHL	Sec 02 T10S R22E 1406 FSL 0820 FWL
43-047-51778	NBU 1022-2M1BS	Sec 02 T10S R22E 1071 FSL 0686 FWL
	BHL	Sec 02 T10S R22E 1075 FSL 0820 FWL
43-047-51781	NBU 1022-2M1CS	Sec 02 T10S R22E 1057 FSL 0659 FWL
	BHL	Sec 02 T10S R22E 0771 FSL 0704 FWL
43-047-51784	NBU 1022-2M4BS	Sec 02 T10S R22E 1066 FSL 0677 FWL
	BHL	Sec 02 T10S R22E 0414 FSL 0819 FWL
43-047-51786	NBU 1022-2M4CS	Sec 02 T10S R22E 1062 FSL 0668 FWL
	BHL	Sec 02 T10S R22E 0092 FSL 0822 FWL
43-047-51789	NBU 1022-11D2AS	Sec 02 T10S R22E 1053 FSL 0650 FWL
	BHL	Sec 11 T10S R22E 0133 FNL 0360 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
 DN: cn=Michael L. Coulthard, o=Bureau of Land Management,
 ou=Branch of Minerals, email=Michael_Coulthard@blm.gov,
 c=US
 Date: 2011.08.08 08:31:52 -06'00'

RECEIVED: August 08, 2011

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:8-5-11

From: Jim Davis
To: Hill, Brad; Mason, Diana
CC: Bonner, Ed; Garrison, LaVonne; Lytle, Andy
Date: 9/26/2011 5:08 PM
Subject: Anadarko APD approvals 10S 22E Sec 2, 11 and 14
Attachments: Anadarko Approvals from SITLA 9.26.11.xls

The following APDs have been approved by SITLA including arch clearance and paleo clearance:

4304751840 NBU 1022-11P4CS
4304751860 NBU 1022-12M1CS
4304751868 NBU 1022-12M4BS
4304751870 NBU 1022-12M4CS
4304751803 NBU 1022-2G1CS
4304751807 NBU 1022-2G1BS
4304751808 NBU 1022-2H1BS
4304751812 NBU 1022-2H1CS
4304751825 NBU 1022-2H4BS
4304751811 NBU 1022-2B1CS
4304751827 NBU 1022-2B4CS
4304751828 NBU 1022-2B4BS
4304751830 NBU 1022-2C1BS
4304751809 NBU 1022-2I4CS
4304751810 NBU 1022-2P1BS
4304751824 NBU 1022-2I1CS
4304751829 NBU 1022-2I4BS
4304751838 NBU 1022-2P4BS
4304751852 NBU 1022-2P1CS
4304751839 NBU 1022-2P4CS
4304751841 NBU 1022-11B1BS
4304751842 NBU 1022-11A1BS
4304751846 NBU 1022-2O4CS
4304751848 NBU 1022-11A4BS
4304751849 NBU 1022-2O4BS
4304751850 NBU 1022-11A1CS

These APDS are approved including arch clearance but will require **spot paleo monitoring** as recommended in the applicable paleo reports:

4304751758 NBU 1022-2C1CS
4304751767 NBU 1022-2C4BS
4304751768 NBU 1022-2C4CS
4304751779 NBU 1022-2D1BS
4304751780 NBU 1022-2D4BS
4304751782 NBU 1022-2E1BS
4304751783 NBU 1022-2F1BS
4304751760 NBU 1022-2E4BS
4304751761 NBU 1022-2F1CS
4304751764 NBU 1022-2F4BS
4304751765 NBU 1022-2F4CS
4304751766 NBU 1022-2K1BS
4304751785 NBU 1022-2E1CS
4304751775 NBU 1022-2L4CS
4304751778 NBU 1022-2M1BS
4304751781 NBU 1022-2M1CS
4304751784 NBU 1022-2M4BS
4304751786 NBU 1022-2M4CS
4304751789 NBU 1022-11D2AS

4304751802	NBU 1022-11B4CS
4304751813	NBU 1022-11B4BS
4304751815	NBU 1022-11B1CS
4304751817	NBU 1022-11C4AS
4304751818	NBU 1022-11C4CS
4304751855	NBU 1022-11F4AS
4304751805	NBU 1022-11A4CS
4304751814	NBU 1022-11H1BS
4304751822	NBU 1022-11G4CS
4304751823	NBU 1022-11G1BS
4304751837	NBU 1022-11G1CS
4304751853	NBU 1022-11G4BS
4304751834	NBU 1022-11I1CS
4304751835	NBU 1022-12L1CS
4304751857	NBU 1022-11H4BS
4304751858	NBU 1022-11H4CS
4304751861	NBU 1022-12L1BS
4304751863	NBU 1022-11H1CS
4304751866	NBU 1022-11I4BS
4304751871	NBU 1022-11I4CS
4304751872	NBU 1022-12L4BS
4304751873	NBU 1022-12L4CS
4304751816	NBU 1022-11K4BS
4304751843	NBU 1022-11J1CS
4304751851	NBU 1022-11J1BS
4304751859	NBU 1022-11K4CS
4304751862	NBU 1022-11N1BS
4304751864	NBU 1022-11N1CS
4304751865	NBU 1022-11N4BS
4304751867	NBU 1022-11N4CS
4304751869	NBU 1022-11O2AS

These APDS are approved including arch clearance but will require **full paleo monitoring** as recommended in the applicable paleo reports:

4304751771	NBU 1022-2E4CS
4304751772	NBU 1022-2L1CS
4304751773	NBU 1022-2L1BS
4304751774	NBU 1022-2L4BS
4304751776	NBU 1022-2K1CS
4304751777	NBU 1022-2K4BS
4304751819	NBU 1022-2G4CS
4304751820	NBU 1022-2H4CS
4304751844	NBU 1022-2J4BS
4304751845	NBU 1022-2O1CS
4304751847	NBU 1022-2I1BS
4304751854	NBU 1022-2G4BS
4304751797	NBU 1022-11C2CS
4304751799	NBU 1022-11C3DS
4304751800	NBU 1022-11D1CS
4304751801	NBU 1022-11F2DS
4304751821	NBU 1022-11O1CS
4304751831	NBU 1022-11O4CS
4304751832	NBU 1022-11P1BS
4304751833	NBU 1022-11P4BS
4304751836	NBU 1022-12M1BS
4304751856	NBU 1022-11O4BS

That's a big enough list that I'm including a simple spreadsheet that has this same information, but organized in such a way as may be more useful to some of you.

Thanks.

-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-2M1CS			
String	SURF	PROD		
Casing Size(in)	8.625	4.500		
Setting Depth (TVD)	2134	8581		
Previous Shoe Setting Depth (TVD)	40	2134		
Max Mud Weight (ppg)	8.3	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5492	12.3		

Calculations	SURF String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	921		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	665	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	452	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	460	NO	Reasonable for area
Required Casing/BOPE Test Pressure=		2134	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient	

Calculations	PROD String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	5578		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4548	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3690	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4160	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2134	psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	

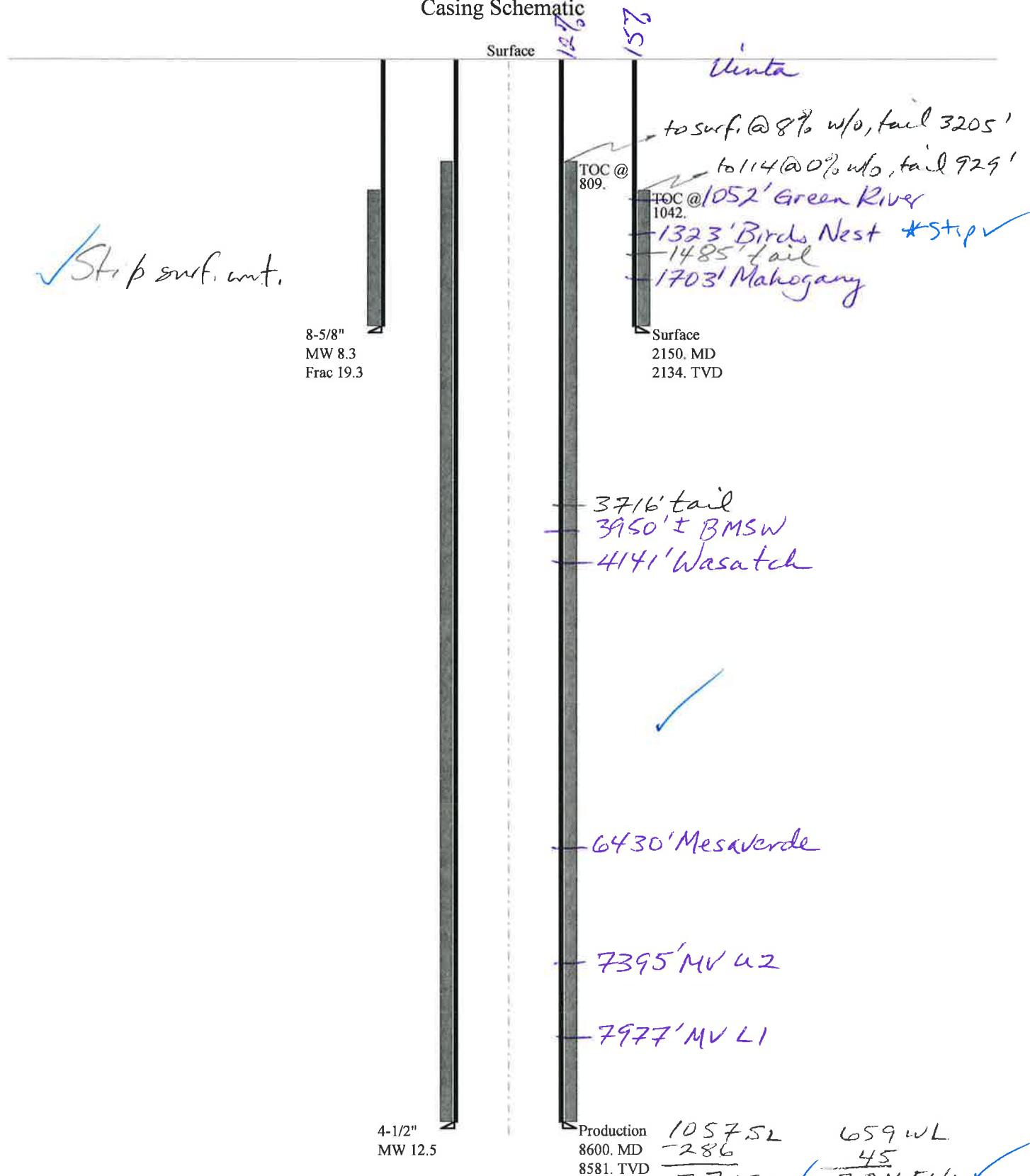
API Well Number: 43047517810000

*Max Pressure Allowed @ Previous Casing Shoe=

psi *Assumes 1psi/ft frac gradient

43047517810000 NBU 1022-2M1CS

Casing Schematic



SW SW Sec 2-10S-22E

Well name:	43047517810000 NBU 1022-2M1CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-51781
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 8.330 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 104 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,042 ft

Burst

Max anticipated surface pressure: 1,892 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,148 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 1,885 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 231 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 8.05 °

Re subsequent strings:

Next setting depth: 8,581 ft
Next mud weight: 12.500 ppg
Next setting BHP: 5,572 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,150 ft
Injection pressure: 2,150 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2150	8.625	28.00	I-55	LT&C	2134	2150	7.892	85140
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	924	1880	2.035	2148	3390	1.58	59.8	348	5.82 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: August 23, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2134 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	43047517810000 NBU 1022-2M1CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-51781
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 12.500 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 194 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 809 ft

Burst

Max anticipated surface pressure: 3,684 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,572 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on air weight.
Neutral point: 6,997 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 290 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8600	4.5	11.60	I-80	LT&C	8581	8600	3.875	113520
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5572	6360	1.141	5572	7780	1.40	99.5	212	2.13 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: August 23, 2011
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8581 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
Well Name	NBU 1022-2M1CS				
API Number	43047517810000	APD No	4314	Field/Unit	NATURAL BUTTES
Location: 1/4,1/4	SWSW	Sec 2	Tw 10.0S	Rng 22.0E	1057 FSL 659 FWL
GPS Coord (UTM)	635475	4425828	Surface Owner		

Participants

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Mark Kuehn, Doyle Holmes, (Kerr McGee). John Slauch, Mitch Batty, (Timberline). Jim Davis (SITLA). David Hackford, (DOGM).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is approx. 1100 feet to the southeast. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 59.1 road miles following Utah State, Uintah County and oilfield development roads. Five wells, in addition to this one (for a total of six) will be directionally drilled from this pad. This proposed location will be a new pad. A 595 foot access road will be constructed. The proposed location will run in an east-west direction along the top of a flat topped ridge. This ridge breaks off sharply into rugged secondary canyons especially on the south and west sides. A shallow draw coming to this site from the north will be re-routed around the location. The reserve pit will be on the north side of the location and the excess cut stockpile will be on the east and north sides of the location. The east half of the location will be compacted fill. The pad should be stable and should be a suitable location for six wells, and is on the best site available in the immediate area.

Surface Use Plan

Current Surface Use
Wildlfe Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.09	Width 352 Length 425	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, raptors and small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N**Sedimentation Issues** N**Site Stability Issues** Y

The east half of the location will be fill and shall be compacted during construction.

Drainage Diversion Required? Y

A shallow draw coming onto the location from the north shall be re-routed.

Berm Required? N**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N**Reserve Pit****Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	100 to 200	5
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
	Final Score	40
		1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut on the north side of the location. Dimensions are 120' x 245' x 12' deep with 2' of freeboard. Kerr McGee agreed to line the pit with a 30-mil liner and 2 layers of felt.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y**Other Observations / Comments**

Of the six wells being drilled from this pad, one will have a well bore that leave section two and produces from section eleven to the south. This well is the NBU 1022-11D2AS.

David Hackford
Evaluator

8/18/2011
Date / Time

Application for Permit to Drill

Statement of Basis

9/27/2011

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
4314	43047517810000	LOCKED	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	NBU 1022-2M1CS		Unit	NATURAL BUTTES	
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	SWSW 2 10S 22E S 1057 FSL 659 FWL GPS Coord (UTM) 635472E 4425818N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,150' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,950'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 2. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

9/21/2011
Date / Time

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit on the northeast end of a major drainage divide called Archy Bench. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is 1100' to the southwest. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 41 air miles to the northwest. Access from Vernal is approximately 59.1 road miles following Utah State, Uintah County and oilfield development roads. A 595' access road will be constructed.

Six wells will be directionally drilled from this location. They are the NBU 1022-11D2AS, NBU 1022-2M1CS, NBU 1022-2M4CS, NBU 1022-2M4BS, NBU 1022-2M1BS, and the NBU 1022-2L4CS. The proposed location is on a flat topped ridge that runs in an east-west direction. This ridge breaks off sharply into rugged secondary canyons especially to the south and west sides. A shallow drainage enters the proposed site from the north and will be re-routed around the location.. The pad as constructed should be stable and sufficient for six wells, and is the best site in the immediate area.

Excess material will be stockpiled on the east and north sides of the location. The east side of location will be fill and will be compacted during construction.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Jim Davis was present. Kerr McGee was told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford
Onsite Evaluator

8/18/2011
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
----------	-----------

RECEIVED: September 27, 2011

Application for Permit to Drill Statement of Basis

9/27/2011

Utah Division of Oil, Gas and Mining

Page 2

Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the north side of the location.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 8/1/2011**API NO. ASSIGNED:** 43047517810000**WELL NAME:** NBU 1022-2M1CS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6100**CONTACT:** Andy Lytle**PROPOSED LOCATION:** SWSW 02 100S 220E**Permit Tech Review:** ☒**SURFACE:** 1057 FSL 0659 FWL**Engineering Review:** ☒**BOTTOM:** 0771 FSL 0704 FWL**Geology Review:** ☒**COUNTY:** UINTAH**LATITUDE:** 39.97357**LONGITUDE:** -109.41361**UTM SURF EASTINGS:** 635472.00**NORTHINGS:** 4425818.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** ST UT ML 22651**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 3 - State**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**☒ **PLAT**☒ **Bond:** STATE - 22013542☐ **Potash**☒ **Oil Shale 190-5**☐ **Oil Shale 190-3**☐ **Oil Shale 190-13**☒ **Water Permit:** 43-8496☐ **RDCC Review:**☐ **Fee Surface Agreement**☒ **Intent to Commingle****Commingle Approved****LOCATION AND SITING:**☐ **R649-2-3.****Unit:** NATURAL BUTTES☐ **R649-3-2. General**☐ **R649-3-3. Exception**☒ **Drilling Unit****Board Cause No:** Cause 173-14**Effective Date:** 12/2/1999**Siting:** 460' Fr U Bdry & Uncommitted Tracts☒ **R649-3-11. Directional Drill****Comments:** Presite Completed

Stipulations: 3 - Commingle - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmadonald

RECEIVED: September 27, 2011



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: NBU 1022-2M1CS
API Well Number: 43047517810000
Lease Number: ST UT ML 22651
Surface Owner: STATE
Approval Date: 9/27/2011

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingling:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:



For John Rogers
Associate Director, Oil & Gas

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By JAIME SCHARNOWSKE Phone Number 720.929.6304
Well Name/Number NBU 1022-2M1CS
Qtr/Qtr SWSW Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 4304751781

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 04/10/2012 16:30 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

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APR 10 2012

DIV. OF OIL, GAS & MINING

Date/Time 04/17/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT
435.828.0986 OR LOVEL YOUNG AT 435.781.7051

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By JAIME SCHARNOWSKE Phone Number 720.929.6304
Well Name/Number NBU 1022-2M1CS
Qtr/Qtr SWSW Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 4304751781

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

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Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
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☐ Liner
☐ Other

RECEIVED

APR 10 2012

DIV. OF OIL, GAS & MINING

Date/Time 04/17/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT
435.828.0986 OR LOVEL YOUNG AT 435.781.7051

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 4/10/2012	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 04/10/2012 AT 2300 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY April 27, 2012		
NAME (PLEASE PRINT) Sheila Wopsock	PHONE NUMBER 435 781-7024	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 4/12/2012	

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078 Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751781	NBU 1022-2M1CS		SWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	4/10/2012		4/24/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. SPUD WELL ON 04/10/2012 AT 2300 HRS. WSMVD							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751778	NBU 1022-2M1BS		SWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	4/11/2012		4/24/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. SPUD WELL ON 04/11/2012 AT 1030 HRS. WSMVD							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751775	NBU 1022-2L4CS		SWSW	2	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	4/11/2012		4/24/2012		
Comments: MIRU TRIPPLE A BUCKET RIG. SPUD WELL ON 04/11/2012 AT 1330 HRS. WSMVD							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK

Name (Please Print)

Signature

REGULATORY ANALYST

Title

4/12/2012

Date

(5/2009)

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Div. of Oil, Gas & Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
5. FIELD and POOL or WILDCAT: NATURAL BUTTES		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 4/26/2012 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <div style="display: flex;"> <div style="flex: 1;"> <p>THE OPERATOR REQUESTS APPROVAL FOR A FIT WAIVER, A CLOSED LOOP DRILLING OPTION, AND A PRODUCTION CASING CHANGE. ALL OTHER ASPECTS OF THE PREVIOUSLY APPROVED DRILLING PLAN WILL NOT CHANGE. PLEASE SEE THE ATTACHMENT. THANK YOU.</p> </div> <div style="flex: 1; text-align: right;"> <p>Approved by the Utah Division of Oil, Gas and Mining</p> <p>Date: May 10, 2012</p> <p>By: <u><i>Derek Duff</i></u></p> </div> </div>		
NAME (PLEASE PRINT) Gina Becker		PHONE NUMBER 720 929-6086
SIGNATURE N/A		TITLE Regulatory Analyst II
DATE 4/26/2012		

Kerr-McGee Oil & Gas Onshore. L.P.**NBU 1022-2M1CS**

Surface: 1057 FSL / 659 FWL SWSW
BHL: 771 FSL / 704 FWL SWSW

Section 2 T10S R22E

Uintah County, Utah
Mineral Lease: ST UT ML 22651

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,052'	
Birds Nest	1,323'	Water
Mahogany	1,703'	Water
Wasatch	4,141'	Gas
Mesaverde	6,430'	Gas
Sego	8,581'	Gas
TVD	8,581'	
TD	8,600'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8581' TVD, approximately equals
 5,492 psi 0.64 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,592 psi (bottom hole pressure
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
 Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

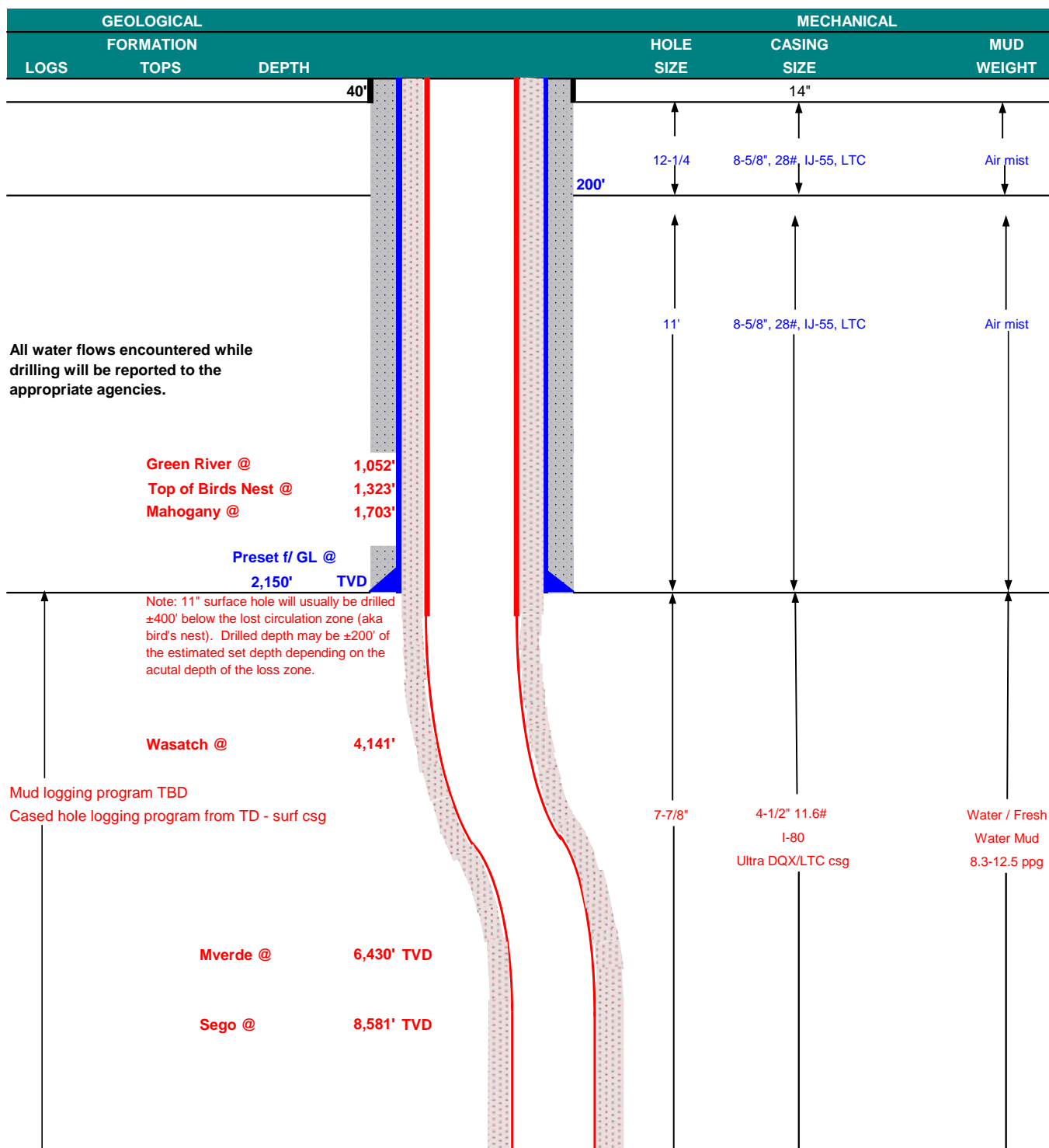
Please refer to the attached Drilling Program.

NBU 1022-2M1CS

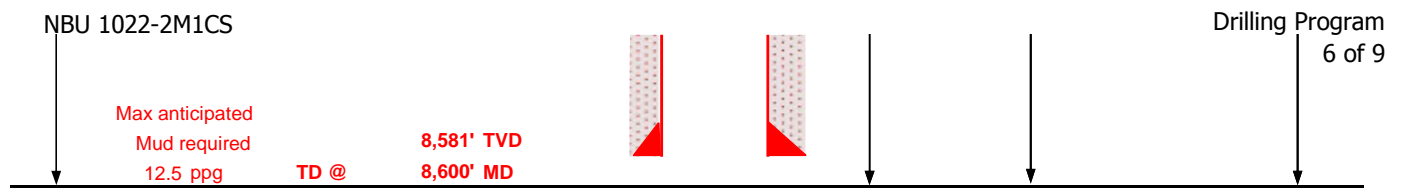
Drilling Program
5 of 9

KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	April 26, 2012		
WELL NAME	NBU 1022-2M1CS					TD	8,581'	TVD	8,600' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5051.2
SURFACE LOCATION	SWSW	1057 FSL	659 FWL	Sec 2	T 10S	R 22E			
	Latitude: 39.973646		Longitude: -109.413634				NAD 27		
BTM HOLE LOCATION	SWSW	771 FSL	704 FWL	Sec 2	T 10S	R 22E			
	Latitude: 39.97286		Longitude: -109.413472				NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								



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NBU 1022-2M1CS

Drilling Program
7 of 9

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						LTC		DQX
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,150	28.00	IJ-55	LTC	2.52	1.87	6.60
						7,780	6,350	223,000
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.14	3.31
						7,780	6,350	223,000
	4-1/2"	5,000 to 8,600'	11.60	I-80	LTC	1.11	1.14	6.60

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1						
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE	NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2						
LEAD	1,650'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	150	35%	11.00	3.82
TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	3,640'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	290	35%	12.00	3.38
TAIL	4,960'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,170	35%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

DATE:

RECEIVED: Apr. 26, 2012

Sundry Number: 25137 API Well Number: 43047517810000

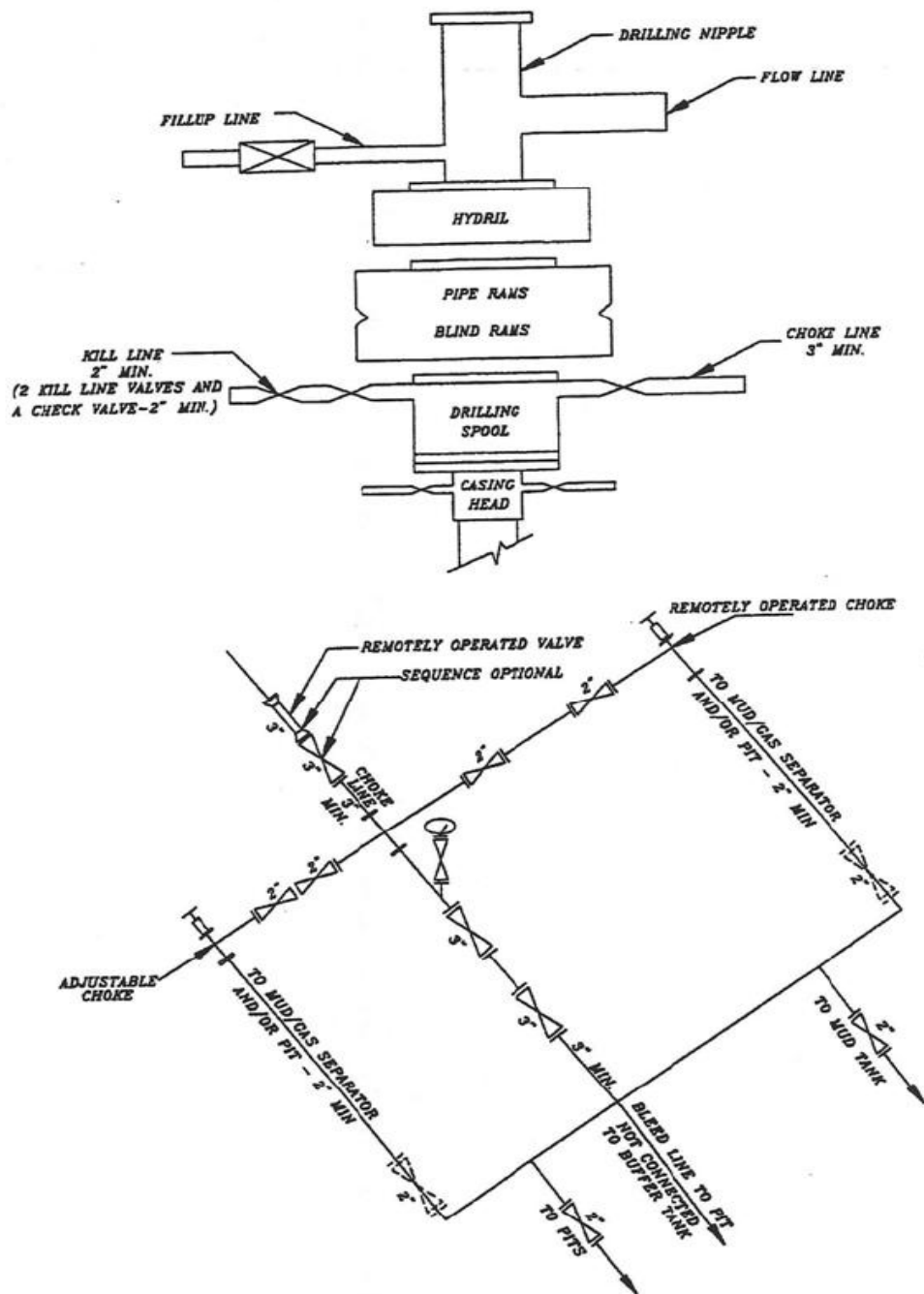
NBU 1022-2M1CS
DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

Drilling Program
DATE: _____
8 of 9

RECEIVED: Apr. 26, 2012

EXHIBIT A
NBU 1022-2M1CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/16/2012	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON 4/14/2012. DRILLED SURFACE HOLE TO 2336'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
NAME (PLEASE PRINT) Jaime Scharnowske		PHONE NUMBER 720 929-6304
SIGNATURE N/A		TITLE Regularatory Analyst
DATE 4/17/2012		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 08, 2012

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 146
Submitted By KENT MOORE Phone Number 435- 828-0987
Well Name/Number NBU 1022-2M1CS
Qtr/Qtr SW/SW Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 4304751781

Casing – Time casing run starts, not cementing times.

- ☐ Production Casing
☐ Other

Date/Time _____ AM ☐ PM ☐

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MAY 24 2012

DIV. OF OIL, GAS & MINING

BOPE

- ☒ Initial BOPE test at surface casing point
☐ Other

Date/Time 5/30/12 00:30 AM ☒ PM ☐

Rig Move

Location To: _____

Date/Time _____ AM ☐ PM ☐

Remarks _____

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/4/2012	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2336' TO 8620' ON 6/1/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN 146 RIG ON 6/4/2012 @ 19:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 June 13, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 6/6/2012	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 146
Submitted By KENT MOORE Phone Number 435- 828-0987
Well Name/Number NBU 1022-2M1CS
Qtr/Qtr SW/SW Section 2 Township 10S Range 22E
Lease Serial Number ST UT ML 22651
API Number 4304751781

Casing – Time casing run starts, not cementing times.

☒ Production Casing
☐ Other

Date/Time 6/3/12 02:00 AM ☒ PM ☐

BOPE

☐ Initial BOPE test at surface casing point
☐ Other

Date/Time _____ AM ☐ PM ☐

RECEIVED

JUN 01 2012

Rig Move

Location To: _____

DIV. OF OIL, GAS & MINING

Date/Time _____ AM ☐ PM ☐

Remarks _____

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/3/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No activity for the month of July 2012. Well TD at 8,620'.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 06, 2012		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 8/3/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
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	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Started completing the well in August 2012. Well TD at 8,620		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 05, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/5/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: NBU 1022-2M1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1057 FSL 0659 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSW Section: 02 Township: 10.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047517810000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/20/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 09/20/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 25, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/24/2012	

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER _____

b. TYPE OF WORK: NEW WELL ☒ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER _____

2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6000

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: SWSW 1057 FSL 659 FWL S2, T10S, R22E
AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSW 785 FSL 692 FWL S2,T10S,R22E
AT TOTAL DEPTH: SWSW 755 FSL 722 FWL S2,T10S,R22E BHL by HSM

5. LEASE DESIGNATION AND SERIAL NUMBER: ST UT ML 22651

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME: UTU63047A

8. WELL NAME and NUMBER: NBU 1022-2M1CS

9. API NUMBER: 4304751781

10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 2 10S 22E S

12. COUNTY: UINTAH 13. STATE: UTAH

14. DATE SPUDDED: 4/10/2012 15. DATE T.D. REACHED: 6/1/2012 16. DATE COMPLETED: 9/20/2012 ABANDONED ☐ READY TO PRODUCE ☒

17. ELEVATIONS (DF, RKB, RT, GL): 5046 GL

18. TOTAL DEPTH: MD 8,620 TVD 8,603 19. PLUG BACK T.D.: MD 8,561 TVD 8,541 20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each): BHP-HDIL/ZDL/CNGR-CBL/GR/CCL/TEMP

23. WAS WELL CORED? NO ☒ YES ☐ (Submit analysis)
WAS DST RUN? NO ☒ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☒ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,315		1,025		0	
7 7/8"	4 1/2" I-80	11.6#	0	8,607		1,792		70	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,036							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	6,535	8,457			6,535 8,457	0.36	186	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6535-8457	PUMP 8720 BBLS SLICK H2O & 188,184 LBS 30/50 OTTAWA SAND
	8 STAGES

29. ENCLOSED ATTACHMENTS:

- ☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☒ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER: _____

30. WELL STATUS:

PROD
RECEIVED

OCT 16 2012

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 9/20/2012	TEST DATE: 9/24/2012	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 3,092	WATER – BBL: 0	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,769	CSG. PRESS. 2,210	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS: PROD

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,052
				BIRD'S NEST	1,335
				MAHOGANY	1,718
				WASATCH	4,169
				MESAVERDE	6,329

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 5055'; LTC csg was run from 5055' to 8607'. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) JAIME SCHARNOWSKE

TITLE REGULATORY ANALYST

SIGNATURE

Jaime Scharnowske

DATE

10/12/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: ENSIGN 146/146, PROPETRO 11/11

Event: DRILLING

Start Date: 12/8/2011

End Date: 6/4/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/14/2012	19:00 - 20:00	1.00	MIRU	01	B	P		NBU 1022 - 2M1CS (WELL 2 OF 6) INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG. SAFETY MEETING PU 12.25' BIT & DIR. TOOLS
	20:00 - 20:30	0.50	DRLSUR	06	A	P		PU 12.25' BIT & DIR. TOOLS
	20:30 - 22:30	2.00	DRLSUR	02	D	P		DRL F/ 44'- T/210' (166'@ 83' PER HR) W.O.B. 5-15K RPM 45 UP/DWN/ROT 20/20/20 PSI ON/OFF 600/400 M.W. 8.4# VIS 27 512 GPM PUMP RATE NO AIR
	22:30 - 23:00	0.50	DRLSUR	06	A	P		TOOH WITH DRILL STRING AND #1 BHA
	23:00 - 0:00	1.00	DRLSUR	06	A	P		TIH WITH DRILL STRING AND #2 BHA TAG @ 210'
4/15/2012	0:00 - 12:00	12.00	DRLSUR	02	D	P		DRL F/210' T/1810' (1600'@ 133.3' PER HR) W.O.B. 20K RPM 45 UP/DWN/ROT 70/65/60 PSI ON/OFF 1600/1400 M.W. 8.4# VIS 27 512 GPM PUMP RATE 2420 CFM AIR RATE LOST CIRCULATION @ 1480'
	12:00 - 17:00	5.00	DRLSUR	02	D	P		DRL F/1810' T/2336' (526'@ 105.2' PER HR) W.O.B. 20K RPM 45 UP/DWN/ROT 76/61/61 PSI ON/OFF 1850/1650 512 GPM PUMP RATE 2420 CFM AIR RATE 1.89' RIGHT 4.62' HIGH OF TARGET CIRCULATE FOR CASING
	17:00 - 19:00	2.00	DRLSUR	05	C	P		LDDS, BHA & DIRECTIONAL TOOLS
	19:00 - 21:30	2.50	DRLSUR	06	D	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. MOVE CSG INTO POSITION TO P/U.
	21:30 - 22:30	1.00	DRLSUR	12	A	P		RUN 52 JTS 8 5/8, 28# J55 CASING SET SHOE @ 2301.05' SET BAFFLE @ 2256.8'
	22:30 - 0:00	1.50	DRLSUR	12	C	P		RUN 52 JTS 8 5/8, 28# J55 CASING SET SHOE @ 2301.05' SET BAFFLE @ 2256.8'
								HOLD SAFETY MEETING, PUMP ON CASING RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES..
4/16/2012	0:00 - 1:00	1.00	DRLSUR	12	C	P		
	1:00 - 2:00	1.00	DRLSUR	12	B	P		

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: ENSIGN 146/146, PROPETRO 11/11

Event: DRILLING

Start Date: 12/8/2011

End Date: 6/4/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	2:00 - 6:00	4.00	DRLSUR	12	E	P		HOLD SAFETY MEETING. PRO PETRO CMTERS MAKE UP HEAD & LOAD PLUG TEST LINES TO 2000 PSI. PUMP 120 BBLS OF 8.4# H2O AHEAD, PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. PUMP 300 SX (61.4 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). DROP PLUG ON FLY AND DISPLACE W/ 134.6 BBLS OF 8.4# H2O. LIFT PRESSURE 350 PSI. BUMP PLUG AND HOLD 700 PSI FOR 5 MIN. TOP DIDN'T HOLD. HELD PRESSURE THRU JOB NO RETURNS THRU OUT JOB. PUMP 150 SX (30.7 BBLS) 15.8# CMT W/4% CALCIUM DOWN 1".
	6:00 - 6:00	0.00	DRLSUR	13	A	P		WOC, 3.0 HOURS PUMP 125 SKS (25.6 BBLS) CLEAN TRUCKS, CEMENT TO SURFACE
	6:00 - 6:00	0.00	DRLSUR	13	A	P		WOC, 1.5 HOURS PUMP 125 SKS (25.6 BBLS) CLEAN TRUCKS
	6:00 - 6:00	0.00	DRLSUR	13	A	P		WOC, 1.5 HOURS PUMP 325 SKS (66.5 BBLS) CLEAN TRUCKS
5/29/2012	22:00 - 23:00	1.00	MIRU	01	C	P		RIG DOWN, SKID RIG, RIG UP
	23:00 - 0:00	1.00	DRLPRO	14	A	P		N/UP BOPE
5/30/2012	0:00 - 3:00	3.00	DRLPRO	15	A	P		TEST BOPE, RAMS, CHOKE, CHOKE LINE, MANUAL VALVES, FLOOR VALVES, HCR & IBOP 250 LOW 5000 HIGH, ANNULAR 250 LOW 2500 HIGH, CASING 1500
	3:00 - 3:30	0.50	DRLPRO	14	B	P		INSTALL WEARBUSHING
	3:30 - 6:30	3.00	DRLPRO	06	A	P		MAKE UP HUNTING .29 RPG 1.50 deg MUD MOTOR, SMITH MDI616 BIT, RIH DIRECTIONAL BHA SCRIBE & ORIENT, RIH TAG CEMENT @ 2185'
	6:30 - 7:00	0.50	DRLPRO	07	B	P		CENTER & LEVEL DERRICK, INSTALL ROTATING HEAD
	7:00 - 8:00	1.00	DRLPRO	02	F	P		DRILL CEMENT, FLOAT EQUIPMENT & RATHOLE F/2185' TO 2350'
								WOB 5/10
								RPM 35
								TQ 6
								SPM 96 GPM 470
	8:00 - 14:00	6.00	DRLPRO	02	D	P		DRILL/SLIDE F/2350' TO 3316' (966' @ 161fph)
								MW 8.5 VIS 27
								WOB 22/24
								RPM 45
								MM RPM 159
								TQ 6/8
								SPM 112 GPM 550
								PSI OFF/ON 1650/2050
								PU 122, SO 105, ROT 112
								NOV - ON LINE
								SLIDE 76'/1.75 hrs 29%
								ROT 890'/4.25 hrs 71%
								18' NORTH 5' WEST OF CENTER
	14:00 - 14:30	0.50	DRLPRO	07	A	P		RIG SER

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: ENSIGN 146/146, PROPETRO 11/11

Event: DRILLING

Start Date: 12/8/2011

End Date: 6/4/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL/SLIDE F/3316' TO 4860' (1544' @ 162fph) MW 8.5 VIS 27 WOB 22/24 RPM 45 MM RPM 159 TQ 6/8 SPM 112 GPM 550 PSI OFF/ON 1900/2325 PU 146, SO 135, ROT 140 NOV - ON LINE SLIDE 80/1.25 hrs 13% ROT 1464/8.25 hrs 87% 19' NORTH 10' WEST OF CENTER
5/31/2012	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRILL/SLIDE F/4860' TO 6760' (1900' @ 126fph) MW 8.5 VIS 27 WOB 22/24 RPM 35 MM RPM 149 TQ 6/8 SPM 105 GPM 515 PSI OFF/ON 1775/2125 PU 185, SO 150, ROT 166 NOV - ON LINE SLIDE 80/2.0 hrs 13% ROT 1820/13 hrs 87% 16' NORTH 12' WEST OF CENTER
	15:00 - 15:30	0.50	DRLPRO	07	A	P		RIG SER
	15:30 - 23:30	8.00	DRLPRO	02	D	P		DRILL/SLIDE F/6760' TO 7570' (810' @ 101ph) MW 11.1 VIS 38 WOB 22/24 RPM 35 MM RPM 149 TQ 6/8 SPM 105 GPM 515 PSI OFF/ON 2350/2750 PU 222, SO 180, ROT 185 NOV - OFFLINE SLIDE 58/2.5 hrs 31% ROT 752/5.5 hrs 69% 14' NORTH 5' WEST OF CENTER MUD UP SYSTEM @ 7485' (LOST RETURNS ON MUD UP)
	23:30 - 0:00	0.50	DRLPRO	22	G	X		LOST CIRC @ MUD UP 7485' - WORK DRILL STRING - CIR @ REDUCED PUMP RATE
6/1/2012	0:00 - 0:30	0.50	DRLPRO	22	G	P		LOST CIRC @ MUD UP 7485' - WORK DRILL STRING - CIR @ REDUCED PUMP RATE - REGAINED CIRC - LOWER MUD WEIGHT F/11.1 TO 10.7

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: ENSIGN 146/146, PROPETRO 11/11

Event: DRILLING

Start Date: 12/8/2011

End Date: 6/4/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	0:30 - 13:30	13.00	DRLPRO	02	D	P		DRILL/SLIDE F/7570' TO 8482' (912' @ 67fph) MW 11.8 VIS 38 WOB 22/24 RPM 35 MM RPM 142 TQ 6/8 SPM 100 GPM 490 PSI OFF/ON 2450/2775 PU 225, SO 182, ROT 188 NOV - OFFLINE SLIDE 30/1.5 hrs 11% ROT 882'/11.5 hrs 89% 11' SOUTH 17' EAST OF CENTER RIG SER
	13:30 - 14:00	0.50	DRLPRO	07	A	P		
	14:00 - 16:00	2.00	DRLPRO	02	D	P		DRILL/SLIDE F/8482' TO 8620' (138' @ 69fph) MW 12.0 VIS 38 WOB 22/24 RPM 35 MM RPM 142 TQ 6/8 SPM 100 GPM 490 PSI OFF/ON 2450/2775 PU 225, SO 182, ROT 188 NOV - OFFLINE SLIDE 0% ROT 100% 14' SOUTH 17' EAST OF CENTER TD WELL @ 8620' 5' FLARE ON CONNECTIONS - 10/15 MIN CIRC
	16:00 - 18:00	2.00	DRLPRO	05	C	P		
	18:00 - 22:30	4.50	DRLPRO	06	E	P		WIPER TRIP - BACKREAM F/8620' TO 8080' - 6 STANDS, CONTINUE TRIP OUT TO 2315' - WASHED TIGHT SPOTS ON TRIP OUT @ 4968' & 4541'
	22:30 - 0:00	1.50	DRLPRO	06	E	P		TRIP IN FROM 2315' TO 4500' - WASH TIGHT SPOTS ON TRIP IN @ 3896', 4487'
6/2/2012	0:00 - 4:30	4.50	DRLPRO	06	E	P		WIPER TRIP - TRIP IN FROM 4500' TO 8600', WASH FROM 8600' TO 8620' - WASHED TIGHT SPOTS ON TRIP IN @ 4578', 4800', 4897', 4975', 5517', 6572' - LOST 80 BBLS MUD ON TRIP CIRC & CONDITION
	4:30 - 5:30	1.00	DRLPRO	05	A	P		
	5:30 - 9:30	4.00	DRLPRO	22	G	X		LOST TOTAL RETURNS - CIRC AT REDUCED RATE TO REGAIN CIRC - UNABLE TO REGAIN RETURNS, CONTINUE WORK PIPE & ROTATE WITH NO PUMP, BUILDING VOLUME IN RIG TANKS - RECEIVED 260 BBLS 12.5 PPG MUD FROM SST 54, CONTINUE PUMPING DOWN DRILL STRING WORKING PIPE - RE-GAINED RETURNS - LOST 450 BBLS MUD - 15' FLARE 15 MIN CIRC AND CONDITION RAISE MUD WEIGHT TO 12.4 PPG 5% LCM - MINIMAL LOSSES - APPROX 75 BBLS
	9:30 - 12:30	3.00	DRLPRO	05	A	P		
	12:30 - 18:00	5.50	DRLPRO	06	E	P		WIPER TRIP #2 - BACKREAM FROM 8620' TO 8438' (2 STANDS), CONTINUE TRIP OUT TO 2300', WASH THROUGH TIGHT SPOT @ 5655' & 4984'

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: ENSIGN 146/146, PROPETRO 11/11

Event: DRILLING

Start Date: 12/8/2011

End Date: 6/4/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/3/2012	18:00 - 21:30	3.50	DRLPRO	06	E	P		WIPER TRIP - TRIP IN F/2315' TO 8600' - WASH F/8600' TO 8620' - WORKED THRU AREA @ 5633' NO PROBLEMS - LOST 20 BBLS MUD ON TRIP CIRC PRIOR TO TRIP OUT FOR LOGS - 15' FLARE 20 MIN
	21:30 - 23:00	1.50	DRLPRO	05	C	P		TRIP OUT FOR LOGS, NO BACK REAMING OFF BOTTOM TO 8110'
	23:00 - 0:00	1.00	DRLPRO	06	B	P		TRIP OUT F/8110' FOR LOGS, LAYDOWN MUD MOTOR & BIT - NO PROBLEMS ON TRIP OUT RETEIEVE WEARBUSHING
	0:00 - 4:30	4.50	DRLPRO	06	B	P		PRE-JOB SAFETY MEETING, RIG UP & RUN TRIPLE COMBO TO LOGGERS TD @ 3911' - BRIDGED OFF, PULL OUT WIRELINE & REMOVED BOW SPRINGS, RUN IN SLICK BRIDGED OFF @ 3907' - PULL OUT WIRELINE RIG DOWN BAKER ATLAS
	4:30 - 5:00	0.50	DRLPRO	14	B	P		PICK UP 7.875 TRI-CONE BIT & BIT SUB - TRIP IN TO 8600' - WASH F/8600' TO 8620' - NO PROBLEMS ON TRIP IN HOLE - DID NOT SEE TIGHT SPOT @ 3900' CIRC & COND. - 15' FLARE 20 MIN
	5:00 - 9:00	4.00	DRLPRO	11	D	P		TRIP OUT F/8620' TO SURFACE - LAYDOWN BIT SUB & BIT, NO PROBLEMS ON TRIP OUT
	9:00 - 15:00	6.00	DRLPRO	06	F	X		PRE JOB SAFETY MEETING, RIG UP & RUN TRIPLE COMBO TO LOGGERS TD @ 6648' - BRIDGED OFF, LOGGED OUT AS PER RACHEL FRIEDMAN
	15:00 - 16:30	1.50	DRLPRO	05	C	X		RUN IN 3RD ATTEMPT LOGGING TOOLS BRIDGED OFF @ 6655', LOGGED OUT, RIG DOWN BAKER ATLAS
	16:30 - 22:30	6.00	DRLPRO	06	B	X		PREJOB SAFETY MEETING WITH FRANKS, RIG UP & RUN 201 JOINTS 4.5" 11.60 I-80 LTC/DQX PROD CASING - FLOAT SHOE 8606', FLOAT COLLAR 8561', MESA MKR 6405', XOVER 5033'
	22:30 - 0:00	1.50	DRLPRO	11	D	X		CIRC - 10' FLARE 10 MIN
6/4/2012	0:00 - 4:00	4.00	DRLPRO	11	D	X		HPJSM, R/UP BJ & CEMENT 4.5" PROD CASING, TEST LINES 5000 PSI, PUMP 25 BBLS FRESH WATER, 552 SKS LEAD 13.0 PPG 1.77 YIELD, TAIL 1240 SKS 14.3 PPG, 1.31 YIELD, DROPPED PLUG & DISPLACED W/133 BBLS FRESH WATER W/0.1 gal/bbl CLAYFIX II & 0.01 gal/bbl ALDACIDE G @ 2500 PSI, BUMPED PLUG @ 3018 PSI - FLOATS HELD W/1.5 BBLS RETURN, GOOD RETURNS DURING CMT JOB W/13 BBLS LEAD CEMENT TO SURFACE - R/DN BJ
	4:00 - 13:00	9.00	CSGPRO	12	C	P		SET C-22 SLIPS WITH 95K STRING WEIGHT - WEATHERFORD PAT DAVIS
	13:00 - 14:00	1.00	CSGPRO	05	D	P		NIPPLE DOWN BOPE, ROUGH CUT CASING, RELEASE RIG @ 19:00
	14:00 - 16:30	2.50	CSGPRO	12	E	P		
	16:30 - 17:00	0.50	CSGPRO	14	B	P		
	17:00 - 19:00	2.00	CSGPRO	14	A	P		

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 1022-2M1CS BLUE	Wellbore No.	OH
Well Name	NBU 1022-2M1CS	Wellbore Name	NBU 1022-2M1CS
Report No.	1	Report Date	9/19/2012
Project	UTAH-UINTAH	Site	NBU 1022-2M PAD
Rig Name/No.	SWABBCO 6/6	Event	COMPLETION
Start Date	9/19/2012	End Date	9/20/2012
Spud Date	4/14/2012	Active Datum	RKB @5,060.00usft (above Mean Sea Level)
UWI	SW/SW/O/10/S/22/E/2/O/O/26/PM/S/1057/W/O/659/O/O		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	6,535.0 (usft)-8,457.0 (usft)	Start Date/Time	9/19/2012 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	44	End Date/Time	9/19/2012 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	186	Net Perforation Interval	62.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/19/2012 12:00AM	MESAVERDE/			6,535.0	6,536.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

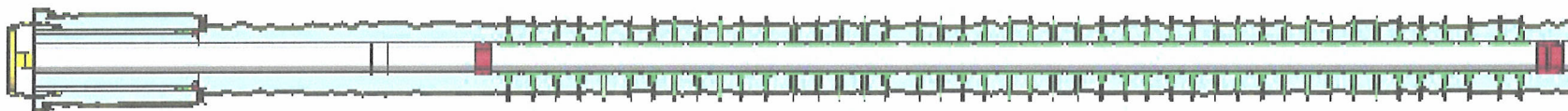
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/19/2012 12:00AM	MESAVERDE/			6,597.0	6,598.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,633.0	6,634.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,678.0	6,680.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,728.0	6,730.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,827.0	6,828.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,849.0	6,850.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,868.0	6,869.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,914.0	6,915.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,942.0	6,944.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			6,956.0	6,958.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,022.0	7,023.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,124.0	7,126.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,184.0	7,185.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,194.0	7,195.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,260.0	7,262.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,278.0	7,279.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,466.0	7,467.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,481.0	7,482.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,496.0	7,497.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,515.0	7,516.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,578.0	7,579.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/19/2012 12:00AM	MESAVERDE/			7,586.0	7,587.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,610.0	7,612.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,680.0	7,681.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,734.0	7,735.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,777.0	7,778.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,799.0	7,800.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,844.0	7,846.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,868.0	7,870.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,900.0	7,901.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,921.0	7,922.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			7,976.0	7,977.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,004.0	8,006.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,037.0	8,040.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,078.0	8,079.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,110.0	8,112.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,143.0	8,144.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,164.0	8,166.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,192.0	8,194.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,240.0	8,241.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,297.0	8,298.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/19/2012 12:00AM	MESAVERDE/			8,442.0	8,444.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/19/2012 12:00AM	MESAVERDE/			8,454.0	8,457.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots**3.1 Wellbore Schematic**

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

Start Date: 9/19/2012

End Date: 9/20/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/14/2012	-							
4/15/2012	-							
8/27/2012	8:30 - 11:00	2.50	FRAC	33	C	P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 6 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 47 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 135 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 111 PSI. 3RD PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 79 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWFW
8/28/2012	-							
8/31/2012	7:00 - 10:00	3.00	FRAC	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

Start Date: 9/19/2012

End Date: 9/20/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/4/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 1)WHP 1706 PSI, BRK 3770 PSI @ 4.8 BPM. ISIP 2423 PSI, FG .73. CALC PERFS OPEN @ 52.1 BPM @ 4808 PSI = 100% HOLES OPEN. (21/21 HOLES OPEN) ISIP 2516 PSI, FG .74, NPI 93 PSI. MP 5900 PSI, MR 51.4 BPM, AP 4789 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE, 120 DEG PHASING. RIH SET CBP @ 8224' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 2)WHP 1470 PSI, BRK 3556 PSI @ 5.7 BPM. ISIP 2253 PSI, FG .72. CALC PERFS OPEN @ 52 BPM @ 4831 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2550 PSI, FG .75, NPI 297 PSI. MP 5011 PSI, MR 52.4 BPM, AP 4695 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8064' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 3)WHP 2210 PSI, BRK 3588 PSI @ 4.7 BPM. ISIP 2461 PSI, FG .75. CALC PERFS OPEN @ 51.6 BPM @ 5019 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2575 PSI, FG .76, NPI 114 PSI. MP 5292 PSI, MR 53.5 BPM, AP 4737 PSI, AR 52 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7890' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 4)WHP 2202 PSI, BRK 3076 PSI @ 4.7 BPM. ISIP 2325 PSI, FG .74. CALC PERFS OPEN @ 51.7 BPM @ 5250 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2503 PSI, FG .76, NPI 178 PSI. MP 5571 PSI, MR 52.3 BPM, AP 4835 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND. SWIFN.</p>

US ROCKIES REGION
Operation Summary Report

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Spud Date: 4/14/2012

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Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

Start Date: 9/19/2012

End Date: 9/20/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/5/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7642' P/U PERF AS PER DESIGN.</p> <p>FRAC STG 5)WHP 766 PSI, BRK 3123 PSI @ 4.7 BPM. ISIP 2067 PSI, FG .71. CALC PERFS OPEN @ 53.2 BPM @ 4745 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2350 PSI, FG .75, NPI 283 PSI. MP 5092 PSI, MR 55.6 BPM, AP 4581 PSI, AR 53.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7309' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 6)WHP 1184 PSI, BRK 3245 PSI @ 4.7 BPM. ISIP 1673 PSI, FG .67. CALC PERFS OPEN @ 53.6 BPM @ 4993 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2559 PSI, FG .80, NPI 886 PSI. MP 5552 PSI, MR 54.6 BPM, AP 5281 PSI, AR 51.4 BPM, PUMPED 30/50 OWATTA SAND. XO T/ WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP 7 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6988' P/U PERF AS PER DESIGN. POOH, SWFN.</p>

US ROCKIES REGION
Operation Summary Report

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Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

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UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/6/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 7)WHP 1241 PSI, BRK 2513 PSI @ 4.7 BPM. ISIP 1558 PSI, FG .66. CALC PERFS OPEN @ 51.8 BPM @ 4613 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2325 PSI, FG .78, NPI 767 PSI. MP 4861 PSI, MR 52.3 BPM, AP 4217 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6760' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 8)WHP 174 PSI, BRK 2138 PSI @ 4.7 BPM. ISIP 1001 PSI, FG .59. CALC PERFS OPEN @ 51.9 BPM @ 3877 PSI = 95% HOLES OPEN. (20/21 HOLES OPEN) ISIP 1775 PSI, FG .71, NPI 774 PSI. MP 4423 PSI, MR 53.5 BPM, AP 3833 PSI, AR 51.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PU 4 1/2 8K HAL CPB. RIH SET CBP @ 6485'. POOH. SWI. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 188,184 LBS TOTAL CLFL = 8720 BBL</p>
9/19/2012	12:00 - 17:00	5.00	DRLOUT	30		P		<p>MIRU ND WELL HEAD NU BOPS RU FLOOR & TUBING EQUIP PU POBS PKG TALLY & PU TUBING RIH TAG 1ST PLUG RU DRILLING EQUIP PREP TO D/O IN AM</p>
9/20/2012	7:00 - 7:15	0.25	DRLOUT	48		P		<p>JSA= DRILLING EQUIP</p>

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

Start Date: 9/19/2012

End Date: 9/20/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 17:00	9.75	DRLOUT	30		P		EST CIRC TEST BOPS TO 3000# DRILL 1ST PLUG
								PLUG #1] DRILL THRU HALLI 8K CBP @ 6485' IN 11 MIN W/ 0 INCREASE
								PLUG #2] CONTINUE TO RIH TAG SAND @ 6735'(25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 6760' IN 9 MIN W/ 100# INCREASE
								PLUG #3] CONTINUE TO RIH TAG SAND @ 6963' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 6988' IN 9 MIN W/ 150# INCREASE
								PLUG #4] CONTINUE TO RIH TAG SAND @ 7279' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7309' IN 7 MIN W/ 100# INCREASE
								PLUG #5] CONTINUE TO RIH TAG SAND @ 7612' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7642' IN 8 MIN W/ 50# INCREASE
								PLUG #6] CONTINUE TO RIH TAG SAND @ 7860' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 7890' IN 7 MIN W/ 100# INCREASE
								PLUG #7] CONTINUE TO RIH TAG SAND @ 8039' (25' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8064' IN 8 MIN W/ 50# INCREASE
								PLUG #8] CONTINUE TO RIH TAG SAND @ 8194' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8224' IN 9 MIN W/ 100# INCREASE
								PBTD] CONTINUE TO RIH TAG SAND @ 8501' (60' FILL) C/O & DRILL TO PBTD @ 8561' CIRC CLEAN POOH LD 17 JNTS LAND TUBING ON HNGR W/ 253 JNTS 2-3/8" L-80 RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD DROP BALL PUMP OFF BIT @ 2200 PSI SIW NU & TEST FLOWLINE TURN WELLOVER TO FBC RD RIG MOVE TO 11D2AS
								TUBING DETAIL
								K.B.....14.0
								0'
								HANGER.....8
								3"
								253 JNTS 2-3/8"
								L-80.....8019.20'
								POBS.....2.2
								0'
								EOT@.....8036.2
								3'
								TOTAL FLUID PUMPED=8720 BBLS
								RIG RECOVERD= 2300 BBLS
								LEFT TO REC= 6420 BBLS

US ROCKIES REGION
Operation Summary Report

Well: NBU 1022-2M1CS BLUE

Spud Date: 4/14/2012

Project: UTAH-UINTAH

Site: NBU 1022-2M PAD

Rig Name No: SWABBCO 6/6, SWABBCO 6/6

Event: COMPLETION

Start Date: 9/19/2012

End Date: 9/20/2012

Active Datum: RKB @5,060.00usft (above Mean Sea Level)

UWI: SW/SW/0/10/S/22/E/2/0/0/26/PM/S/1057/W/0/659/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - 17:00	0.00	DRLOUT	50				CTAP DELIVERED= 283 JNTS RIG USED= 253 JNTS RETURNED= 30 JNTS WELL TURNED TO SALES @ 1440 HR ON 9/20/2012, 2,500 MCFD, 1920 BWPD, FCP 2400#, FTP 2000#, 20/64" CK.
9/24/2012	7:00 -			50				WELL IP'D ON 9/24/12 - 3092 MCFD, 0 BWPD, 0 BOPD, CP 2210#, FTP 1769#, LP 127#, 24 HRS, CK 20/64

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH NBU 1022-2M PAD
Well: NBU 1022-2M1CS
Wellbore: NBU 1022-2M1CS
Section:
SHL:
Design: NBU 1022-2M1CS (wp01)
Latitude: 39.973646
Longitude: -109.413634
GL: 5046.00
KB: 5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4140.00	4156.04	WASATCH
4740.00	4756.04	top of cylinder
6431.00	6447.07	MESAVERDE
8580.00	8596.11	SEGO

WELL DETAILS: NBU 1022-2M1CS

+N/-S	+E/-W	Northing	Ground Level: Easting	5046.00 Latitude	39.973646	Longitude	Slot
0.00	0.00	14520401.40	2084872.42			-109.413634	

CASING DETAILS

TVD	MD	Name	Size
2291.02	2305.05	8-5/8"	8-5/8



Azimuths to True North
Magnetic North: 10.92°

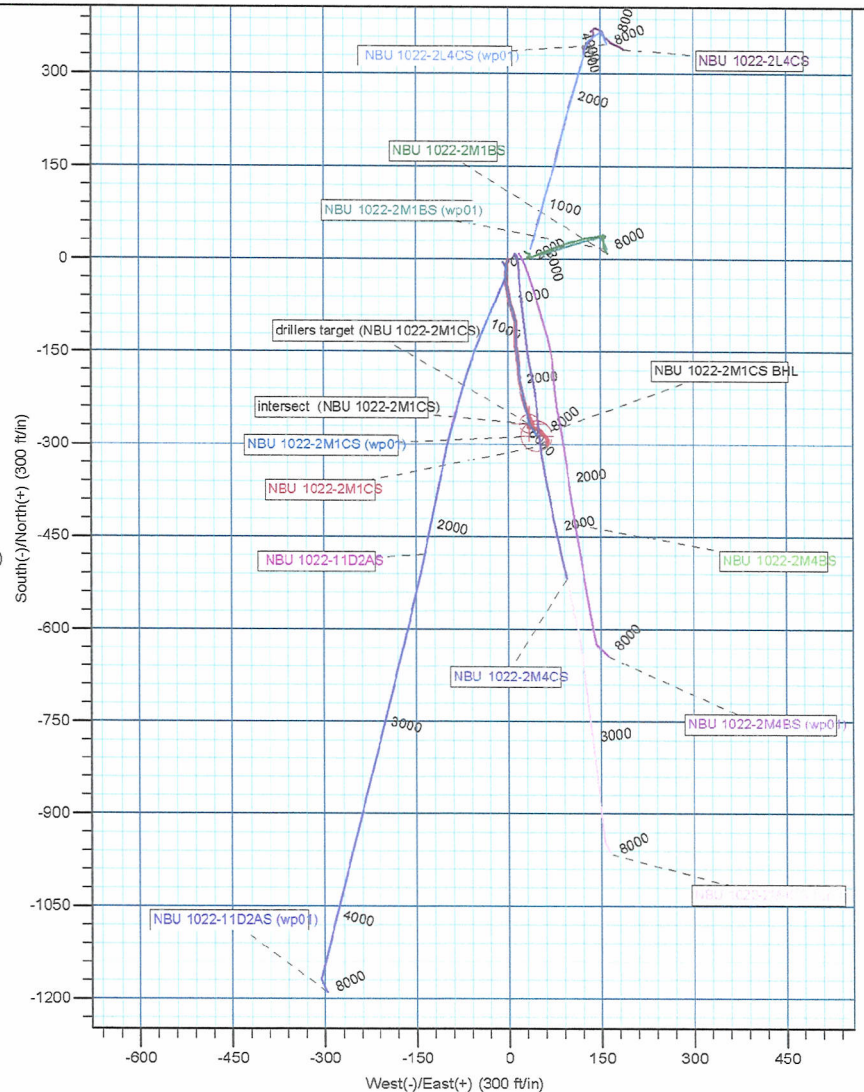
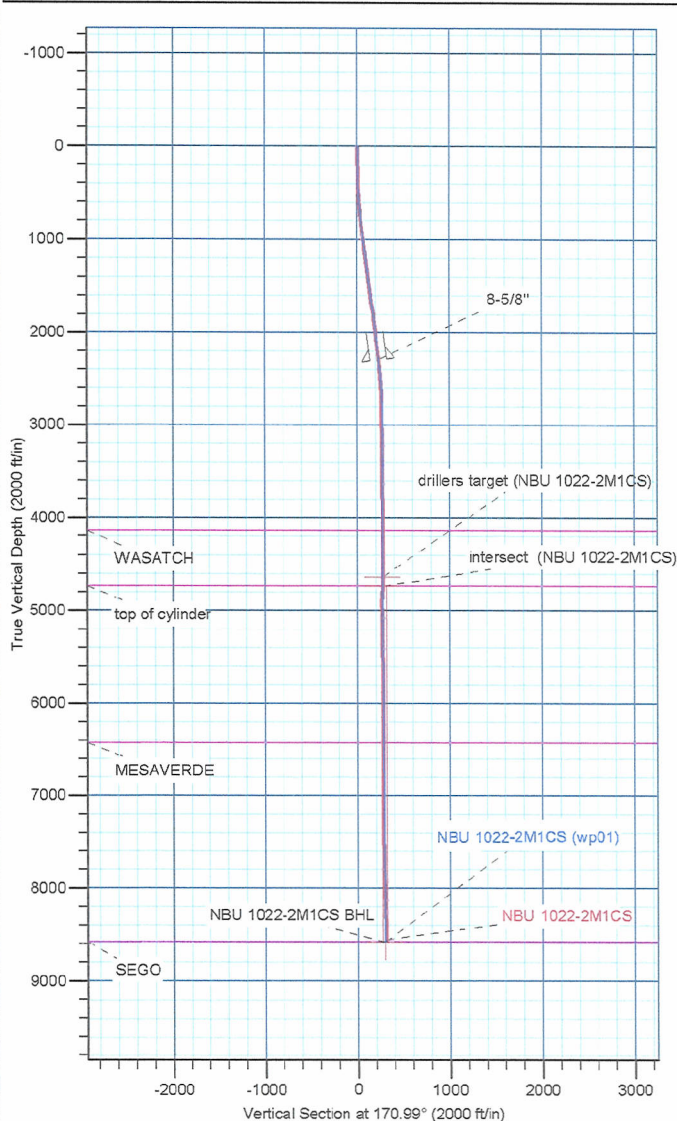
Magnetic Field
Strength: 52236.7nT
Dip Angle: 65.84°
Date: 5/8/2012
Model: IGRF2010

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
drillers target (NBU 1022-2M1CS)	4640.00	-266.27	33.40	14520135.76	2084910.55	39.972915	-109.413515	Circle (Radius: 15.00)
intersect (NBU 1022-2M1CS)	4740.00	-266.54	33.55	14520135.50	2084910.71	39.972914	-109.413514	Point
NBU 1022-2M1CS BHL	8580.00	-286.27	45.40	14520115.98	2084922.90	39.972860	-109.413472	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
2281.00	7.30	166.94	2267.17	-224.21	23.57	0.00	0.00	225.14
2431.00	7.30	166.94	2415.95	-242.78	27.87	0.00	0.00	244.15
2794.60	0.03	162.61	2778.56	-265.40	33.13	2.00	-179.98	267.31
4656.04	0.03	162.61	4640.00	-266.27	33.40	0.00	0.00	268.22
4761.42	0.34	149.03	4745.39	-266.57	33.57	0.30	-14.78	268.53
8596.11	0.34	149.03	8580.00	-286.27	45.40	0.00	0.00	289.85



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

UINTAH_NBU 1022-2M PAD

NBU 1022-2M1CS

NBU 1022-2M1CS

Design: NBU 1022-2M1CS

Standard Survey Report

26 September, 2012

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
Site:	UINTAH_NBU 1022-2M PAD	MD Reference:	5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
Well:	NBU 1022-2M1CS	North Reference:	True
Wellbore:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2M1CS	Database:	edmp

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	UINTAH_NBU 1022-2M PAD				
Site Position:		Northing:	14,520,396.87 usft	Latitude:	39.973634
From:	Lat/Long	Easting:	2,084,863.53 usft	Longitude:	-109.413666
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.02 °

Well	NBU 1022-2M1CS					
Well Position	+N/-S	0.00 ft	Northing:	14,520,401.40 usft	Latitude:	39.973646
	+E/-W	0.00 ft	Easting:	2,084,872.41 usft	Longitude:	-109.413634
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,046.00 ft

Wellbore	NBU 1022-2M1CS				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/8/2012	10.92	65.84	52,237

Design	NBU 1022-2M1CS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	10.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	10.00	0.00	0.00	168.27	

Survey Program	Date	9/26/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
155.00	2,281.00	Survey #1 (NBU 1022-2M1CS)	MWD	MWD - STANDARD	
2,360.00	8,620.00	Survey #2 (NBU 1022-2M1CS)	MWD	MWD - STANDARD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
155.00	0.73	181.09	155.00	-0.92	-0.02	0.90	0.50	0.50	0.00
183.00	0.88	174.67	182.99	-1.32	0.00	1.29	0.62	0.54	-22.93
212.00	0.79	179.86	211.99	-1.74	0.02	1.71	0.41	-0.31	17.90
238.00	0.62	190.93	237.99	-2.05	-0.01	2.01	0.83	-0.65	42.58
267.00	0.62	228.11	266.99	-2.31	-0.15	2.23	1.36	0.00	128.21
296.00	0.70	202.27	295.98	-2.58	-0.34	2.46	1.05	0.28	-89.10
324.00	1.06	206.75	323.98	-2.97	-0.52	2.80	1.31	1.29	16.00
352.00	1.41	205.70	351.97	-3.51	-0.78	3.28	1.25	1.25	-3.75
443.00	2.20	200.95	442.93	-6.15	-1.89	5.64	0.88	0.87	-5.22

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 1022-2M PAD
Well: NBU 1022-2M1CS
Wellbore: NBU 1022-2M1CS
Design: NBU 1022-2M1CS

Local Co-ordinate Reference: Well NBU 1022-2M1CS
TVD Reference: 5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
MD Reference: 5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
533.00	3.61	191.55	532.81	-10.54	-3.08	9.70	1.65	1.57	-10.44
623.00	5.10	187.86	622.55	-17.28	-4.19	16.07	1.68	1.66	-4.10
713.00	6.33	178.19	712.10	-26.20	-4.58	24.73	1.73	1.37	-10.74
803.00	7.47	171.33	801.45	-36.95	-3.55	35.46	1.56	1.27	-7.62
893.00	7.74	169.40	890.66	-48.69	-1.55	47.36	0.41	0.30	-2.14
983.00	7.67	167.91	979.85	-60.52	0.82	59.42	0.24	-0.08	-1.66
1,073.00	7.74	167.29	1,069.03	-72.30	3.42	71.49	0.12	0.08	-0.69
1,163.00	7.74	161.93	1,158.22	-83.98	6.63	83.57	0.80	0.00	-5.96
1,253.00	8.11	165.34	1,247.36	-95.88	10.12	95.94	0.66	0.41	3.79
1,343.00	7.10	176.35	1,336.57	-107.57	12.08	107.78	1.96	-1.12	12.23
1,433.00	6.95	182.06	1,425.89	-118.57	12.23	118.58	0.79	-0.17	6.34
1,523.00	7.47	180.30	1,515.18	-129.86	12.01	129.59	0.63	0.58	-1.96
1,613.00	7.56	176.08	1,604.41	-141.61	12.38	141.18	0.62	0.10	-4.69
1,703.00	7.56	171.24	1,693.63	-153.37	13.69	152.95	0.71	0.00	-5.38
1,793.00	7.50	171.86	1,782.85	-165.04	15.42	164.73	0.11	-0.07	0.69
1,883.00	6.95	176.61	1,872.14	-176.29	16.58	175.98	0.90	-0.61	5.28
1,973.00	6.86	177.40	1,961.48	-187.09	17.14	186.67	0.15	-0.10	0.88
2,063.00	7.03	169.57	2,050.83	-197.88	18.38	197.49	1.07	0.19	-8.70
2,153.00	6.82	168.39	2,140.17	-208.53	20.46	208.34	0.28	-0.23	-1.31
2,243.00	7.39	169.57	2,229.48	-219.46	22.58	219.47	0.65	0.63	1.31
2,281.00	7.30	166.94	2,267.17	-224.21	23.57	224.32	0.92	-0.24	-6.92
FIRST MWD SURVEY									
2,360.00	7.71	165.77	2,345.49	-234.24	26.00	234.64	0.55	0.52	-1.48
2,451.00	5.88	158.20	2,435.85	-244.49	29.24	245.32	2.23	-2.01	-8.32
2,541.00	4.56	155.95	2,525.47	-252.03	32.41	253.36	1.48	-1.47	-2.50
2,631.00	2.88	160.08	2,615.28	-257.43	34.63	259.09	1.89	-1.87	4.59
2,722.00	1.44	156.70	2,706.21	-260.63	35.87	262.48	1.59	-1.58	-3.71
2,813.00	0.31	93.45	2,797.20	-261.69	36.56	263.66	1.46	-1.24	-69.51
2,903.00	0.50	122.83	2,887.20	-261.92	37.14	264.00	0.31	0.21	32.64
2,994.00	0.56	118.83	2,978.20	-262.35	37.86	264.57	0.08	0.07	-4.40
3,084.00	0.50	153.58	3,068.19	-262.91	38.42	265.23	0.36	-0.07	38.61
3,175.00	0.88	179.58	3,159.19	-263.97	38.60	266.30	0.53	0.42	28.57
3,266.00	1.13	164.58	3,250.17	-265.53	38.84	267.88	0.40	0.27	-16.48
3,356.00	1.31	180.58	3,340.15	-267.41	39.07	269.77	0.43	0.20	17.78
3,447.00	1.50	170.45	3,431.13	-269.63	39.26	271.98	0.34	0.21	-11.13
3,537.00	0.38	235.95	3,521.11	-270.96	39.21	273.27	1.54	-1.24	72.78
3,628.00	0.56	218.45	3,612.11	-271.48	38.68	273.67	0.25	0.20	-19.23
3,719.00	0.31	67.70	3,703.11	-271.73	38.63	273.91	0.93	-0.27	-165.66
3,809.00	0.44	159.45	3,793.11	-271.96	38.98	274.21	0.61	0.14	101.94
3,900.00	0.63	169.82	3,884.10	-272.78	39.19	275.05	0.23	0.21	11.40
3,990.00	0.75	307.95	3,974.10	-272.91	38.81	275.10	1.43	0.13	153.48
4,081.00	1.00	336.08	4,065.09	-271.81	38.02	273.87	0.54	0.27	30.91
4,172.00	0.31	299.45	4,156.08	-270.97	37.48	272.93	0.85	-0.76	-40.25

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_NBU 1022-2M PAD
Well: NBU 1022-2M1CS
Wellbore: NBU 1022-2M1CS
Design: NBU 1022-2M1CS

Local Co-ordinate Reference: Well NBU 1022-2M1CS
TVD Reference: 5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
MD Reference: 5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,262.00	0.25	12.20	4,246.08	-270.65	37.31	272.59	0.37	-0.07	80.83
4,353.00	0.31	293.45	4,337.08	-270.36	37.13	272.27	0.39	0.07	-86.54
4,444.00	0.25	199.58	4,428.08	-270.45	36.84	272.29	0.45	-0.07	-103.15
4,534.00	0.38	192.83	4,518.08	-270.93	36.70	272.73	0.15	0.14	-7.50
4,625.00	1.00	343.33	4,609.08	-270.46	36.41	272.22	1.48	0.68	165.38
4,716.00	1.56	342.95	4,700.05	-268.52	35.82	270.19	0.62	0.62	-0.42
4,806.00	1.31	355.33	4,790.03	-266.32	35.38	267.95	0.44	-0.28	13.76
4,897.00	0.88	358.45	4,881.01	-264.58	35.27	266.23	0.48	-0.47	3.43
4,987.00	0.25	106.33	4,971.01	-263.95	35.44	265.64	1.10	-0.70	119.87
5,078.00	0.50	157.20	5,062.00	-264.37	35.79	266.13	0.43	0.27	55.90
5,169.00	0.38	145.08	5,153.00	-264.98	36.11	266.79	0.17	-0.13	-13.32
5,259.00	0.75	154.58	5,243.00	-265.76	36.54	267.64	0.42	0.41	10.56
5,350.00	0.69	158.95	5,333.99	-266.81	36.99	268.76	0.09	-0.07	4.80
5,440.00	1.13	145.70	5,423.98	-268.05	37.68	270.11	0.54	0.49	-14.72
5,531.00	1.50	180.00	5,514.96	-269.98	38.19	272.11	0.94	0.41	37.69
5,622.00	0.50	267.70	5,605.94	-271.19	37.79	273.21	1.72	-1.10	96.37
5,713.00	0.63	220.58	5,696.94	-271.58	37.07	273.45	0.51	0.14	-51.78
5,803.00	0.50	221.45	5,786.94	-272.25	36.49	273.99	0.14	-0.14	0.97
5,894.00	0.50	202.83	5,877.93	-272.92	36.07	274.55	0.18	0.00	-20.46
5,985.00	0.88	203.45	5,968.92	-273.93	35.64	275.45	0.42	0.42	0.68
6,075.00	0.81	349.08	6,058.92	-273.93	35.24	275.38	1.79	-0.08	161.81
6,166.00	0.81	330.08	6,149.91	-272.75	34.80	274.13	0.29	0.00	-20.88
6,257.00	0.50	311.20	6,240.91	-271.93	34.18	273.20	0.41	-0.34	-20.75
6,397.00	0.19	212.95	6,380.90	-271.72	33.60	272.88	0.40	-0.22	-70.18
6,438.00	0.50	209.45	6,421.90	-271.93	33.47	273.06	0.76	0.76	-8.54
6,529.00	0.88	350.83	6,512.90	-271.59	33.16	272.66	1.44	0.42	155.36
6,619.00	0.63	359.58	6,602.89	-270.41	33.05	271.48	0.31	-0.28	9.72
6,710.00	0.31	24.95	6,693.89	-269.69	33.15	270.80	0.41	-0.35	27.88
6,800.00	0.44	109.33	6,783.89	-269.58	33.58	270.78	0.57	0.14	93.76
6,891.00	0.63	141.20	6,874.88	-270.09	34.22	271.40	0.38	0.21	35.02
6,982.00	1.25	169.08	6,965.87	-271.45	34.72	272.84	0.83	0.68	30.64
7,072.00	0.50	151.70	7,055.86	-272.76	35.10	274.20	0.87	-0.83	-19.31
7,163.00	1.19	354.33	7,146.86	-272.17	35.19	273.64	1.83	0.76	-172.93
7,254.00	0.31	359.45	7,237.85	-270.98	35.10	272.46	0.97	-0.97	5.63
7,344.00	0.94	95.95	7,327.84	-270.82	35.83	272.45	1.14	0.70	107.22
7,435.00	1.81	116.45	7,418.82	-271.53	37.86	273.56	1.08	0.96	22.53
7,526.00	1.79	94.77	7,509.77	-272.29	40.56	274.85	0.74	-0.02	-23.82
7,616.00	1.81	105.20	7,599.73	-272.78	43.33	275.90	0.36	0.02	11.59
7,707.00	2.06	113.83	7,690.68	-273.82	46.21	277.50	0.42	0.27	9.48
7,798.00	2.19	129.08	7,781.61	-275.58	49.06	279.80	0.64	0.14	16.76
7,888.00	2.25	125.45	7,871.55	-277.68	51.83	282.42	0.17	0.07	-4.03
7,979.00	2.19	141.70	7,962.48	-280.09	54.37	285.29	0.69	-0.07	17.86
8,070.00	2.81	143.70	8,053.39	-283.25	56.77	288.87	0.69	0.68	2.20

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well NBU 1022-2M1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
Site:	UINTAH_NBU 1022-2M PAD	MD Reference:	5046' GL+ 14' RKB @ 5060.00ft (Ensign 146)
Well:	NBU 1022-2M1CS	North Reference:	True
Wellbore:	NBU 1022-2M1CS	Survey Calculation Method:	Minimum Curvature
Design:	NBU 1022-2M1CS	Database:	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,160.00	2.81	144.95	8,143.28	-286.83	59.34	292.90	0.07	0.00	1.39
8,251.00	3.13	139.95	8,234.16	-290.56	62.22	297.14	0.45	0.35	-5.49
8,342.00	1.63	186.83	8,325.09	-293.75	63.66	300.55	2.57	-1.65	51.52
8,432.00	1.69	188.70	8,415.05	-296.33	63.31	303.01	0.09	0.07	2.08
8,523.00	1.72	185.68	8,506.01	-299.01	62.97	305.57	0.10	0.03	-3.32
8,570.00	1.44	189.95	8,552.99	-300.30	62.80	306.79	0.65	-0.60	9.09
LAST MWD SURVEY									
8,620.00	1.44	189.95	8,602.98	-301.54	62.58	307.96	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,281.00	2,267.17	-224.21	23.57	FIRST MWD SURVEY
8,570.00	8,552.99	-300.30	62.80	LAST MWD SURVEY
8,620.00	8,602.98	-301.54	62.58	PROJECTION TO TD

Checked By: _____ Approved By: _____ Date: _____